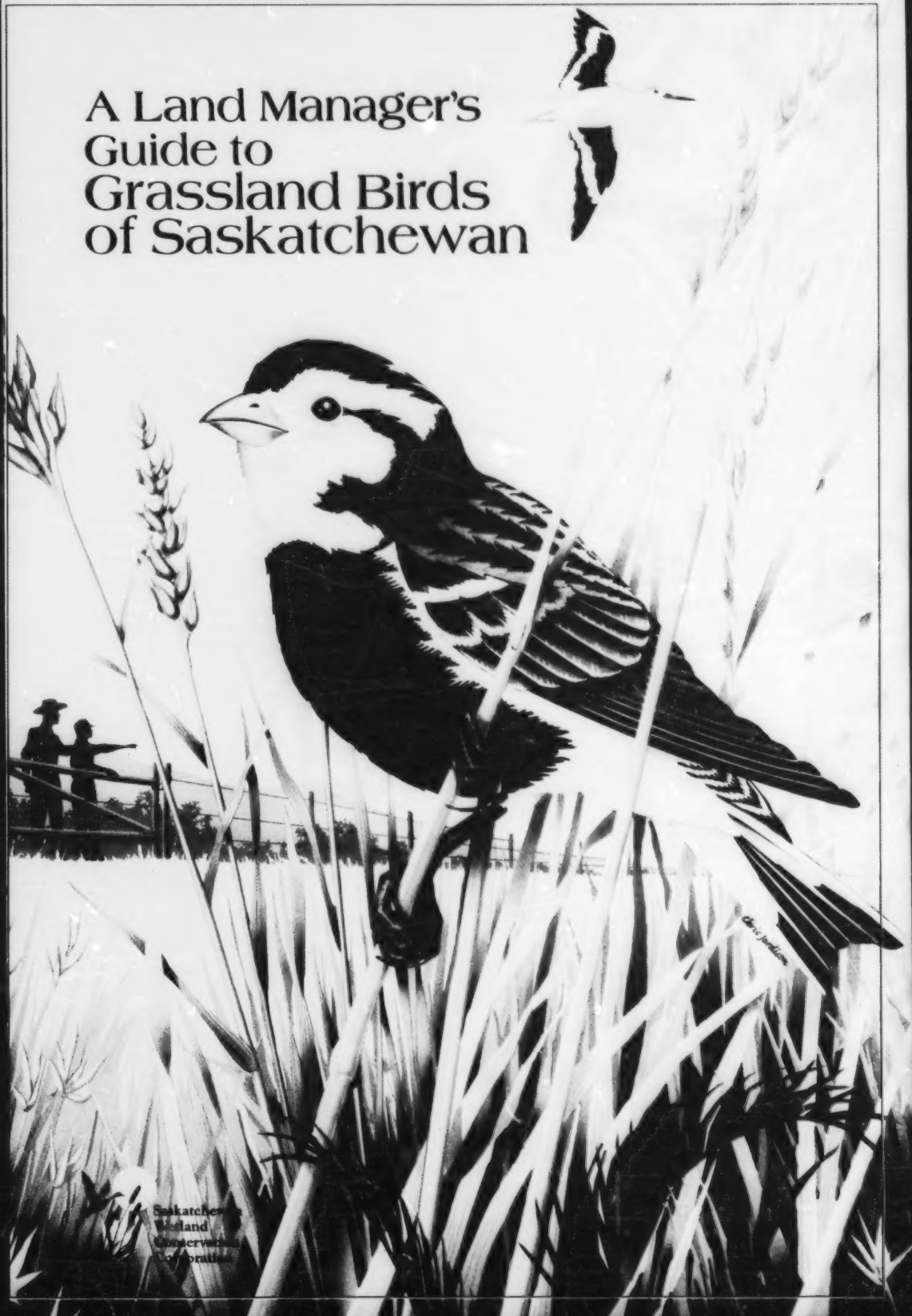
A Land Manager's Guide to Grassland Birds of Saskatchewan



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Introduction

No one in southern Saskatchewan is more intimately familiar with our native prairie than ranchers. The fact that many ranchers earn their livelihood from the same pastures managed by their grandparents or great-grandparents is tribute to their stewardship of the land. Through droughts and floods, ranchers have used their knowledge of the complex relationship between grazers and grass to ensure the long-term health of our native prairie and the wildlife that depends on it.

This guide has two goals. The first is to provide ranchers with basic information on the identification, habitat and biology of grassland birds. The second is to provide information on how pasture management influences grassland birds and their habitat. For this guide we have selected bird species that are most closely tied to grassland. However, because the effects of pasture management often influence wetlands contained within grasslands, we have also included four species that nest on or by water. We hope the Land Manager's Guide to Grassland Birds of Saskatchewan proves to be both informative and entertaining.

Many species of grassland birds are less common now than they were in the 1960s when individuals first began surveying bird populations across North America. Information from these surveys show that grassland species have undergone greater and more widespread population declines than any other group of birds in North America. Loss and degradation of grassland habitat on the breeding and wintering grounds are contributing to the decline of grassland birds.

In Saskatchewan about 80 percent of the original native prairie has been lost. In some regions much of what remains is in small fragmented patches. Invasion by exotic species, and excessive spreading by woody plants on these small patches of prairie make the habitat unsuitable for most grassland birds. Although most of the original prairie in Saskatchewan was lost long ago, habitat loss and degradation still occur.

Native prairie will never again cover Saskatchewan as it did before cultivation, and indeed our society depends on the food produced from cultivated land for survival. However, Saskatchewan is still blessed with more remaining native prairie than many other regions of North America. Conservation of remaining native prairie parcels in healthy condition is the first priority for ensuring grassland birds and other prairie species are not lost altogether. Returning land of marginal cultivation value to grass not only reduces erosion, but provides additional habitat for grassland species and is a source of forage for livestock.

About 85 percent of Saskatchewan's remaining native prairie is privately managed for livestock grazing by individuals who depend on the grass for their livelihood, just as the birds do for their survival. Native prairie requires periodic disturbance, such as grazing or fire, to remain healthy. Idled or overgrazed prairie becomes vulnerable to invasion by woody plants and weeds, and the productivity of grasses decline. As range condition improves, the productivity of the grass increases. Good grassland management makes economic sense for the rancher over the long term under wet and dry conditions, and provides suitable habitat for grassland birds.

While spending time outdoors in Saskatchewan's grasslands many different kinds of birds may be seen and heard.

It is fascinating to know more about these prairie creatures that share our land, their needs and habitat requirements, and to understand how our activities influence bird populations not just in Saskatchewan or Canada, but throughout their range. The information that follows is designed to help readers identify and become more familiar with some of these birds. The bird species present on your land will depend on the type and condition of habitat available and the region of the province the land is located.

The maps included with each species are based on the best information currently available, but birds constantly shift their distribution in response to changes in climate, habitat, food and human activity. To learn more about grassland management and the value of native prairie check out the following web pages:
(http://www.wetland.sk.ca/programs-grassland.html),
and
http:npwrc.usgs.gov

An Introduction to Bird Biology

Unlike the colourful red, yellow and blue plumages worn by many forest birds, grassland birds are mostly brown. In fact many novice bird watchers often refer to these birds as "LBJ's", or "Little Brown Jobbies"! Such drab colouration is needed for camouflage. Blending in with the background is critical for grassland birds, particularly females, which spend much of their time foraging and nesting on the ground where they are vulnerable to predators. However, not all grassland birds are "Little Brown Jobbies". Male Chestnut-collared Longspurs, Lark Buntings, and both sexes of Western Meadowlarks are boldly patterned with brightly coloured feathers. Willets have a drab, gray appearance until their wings are opened to reveal a striking black-and-white wing pattern.

Most of us recognize a Western Meadowlark when we hear it. Their clear ringing song is one of the most welcome signs of spring. Shorebirds often give loud calls while flying, such as the often incessant *"radica-radica"* call of Marbled Godwits. Many other grassland birds have songs that sound more like insects than birds, and are often difficult to hear at a distance. The Grasshopper Sparrow is so named because the main part of its song sounds much like a grasshopper. Savannah, Le Conte's, Nelson's Sharp-tailed and Clay-colored Sparrows all have buzzy, insect-like songs. Because wind noise on the prairies often obscures parts of songs, the unique sound of each grassland bird species enables other birds to identify the singer even if only part of the song is heard. Although some songs sound musical to human ears, the real purpose of song is to keep other males out of the songster's territory while also attracting females. Because sparrow territories are often less than a couple of acres in size, their songs need not carry as far as larger birds which must defend larger territories.

Historically, the open grassland environment had few perches, just the occasional shrub or large rock. Many grassland songbirds don't make use of even these low perches, preferring instead to sing from the ground or grass where they are partially concealed from predators. Other species, such as Western Meadowlarks and Vesper Sparrows seek out perches to sing from, and readily use artificial perches such as fence posts and hay bales. Species such as Chestnut-collared Longspurs and Lark Buntings fly a short distance above the ground and then float slowly down to earth while singing and displaying. Males of a few species, most notably the Sprague's Pipit, fly high into the air until they are no more than a speck against the clouds where they sing from on high.

A bird's habitat should provide everything it needs to survive and reproduce; food, water, and shelter are the fundamental requirements of all living things. The amount and type of habitat required vary among species. Small songbirds may require only a few acres within a patch of grassland to breed, but some species such as Sprague's Pipit are more likely to breed within larger patches. Large birds such as Ferruginous Hawks require as much as 809 ha to search for food.

The birds in this guide occupy a variety of habitat types ranging from wetlands to dry, open prairie. Bird species are adapted to different vegetation conditions even within a single habitat type (Figure 1). For example, upland nesting songbirds and shorebirds are adapted to different heights and densities of grass, which reflect different intensities of grazing and other disturbances. Species such as Bobolink, Nelson's Sharp-tailed Sparrow, Le Conte's Sparrow and Sedge Wrens prefer areas of idle to lightly grazed pasture and hay land with moister conditions, such as wetland margins, that produce tall, dense grasses. Light to moderately grazed pasture is preferred by species such as Sprague's Pipits, Baird's Sparrows and Grasshopper Sparrows. More heavily grazed pasture with short vegetation and bare ground are preferred by species such as Long-billed Curlews, McCown's Longspurs and Horned Larks.

Therefore, the grassland bird community requires patches of grasslands ranging from heavily to lightly grazed or idle if habitat requirements for all species are to be met. In fact, rotational grazing systems on large pastures likely provide the range of grazing pressures that is required both by birds and for vigorous plant growth.

Even species that use wetland habitats require different types of wetlands. For example, Yellow Rails inhabit wet sedge meadows, Piping Plovers prefer alkali wetlands with little vegetation, and Black Terns are associated with cattail and bulrush marshes.

The shelter for nests also varies among species. Most grassland species nest on the ground, but Franklin's Gulls build floating nests, Ferruginous Hawks often nest in trees, Clay-colored Sparrows nest in shrubs, and Burrowing Owls nest underground.

The Brown-headed Cowbird avoids parental duties altogether by laying its eggs in the nests of other species! Even ground nests vary among species. Shorebird nests are little more than a scrape in the ground, and the young leave the nest immediately after hatching. Many sparrows line their nests with grasses, plant stems and cow hair, while Western Meadowlarks and Sprague's Pipits weave a dome of grasses over their nest with a single entrance for access in and out. Ferruginous Hawks and Burrowing Owls often line their nests with dry cowpies!

Grassland birds eat a variety of prey. Many songbirds have a varied diet of seeds, insects and other invertebrates during the winter, but switch to mostly an insect diet during the breeding season. Most grassland songbirds feed their young exclusively insects and other invertebrates. Research undertaken at the Matador Pasture north of Swift Current, SK, documented that grasshoppers and caterpillars were the main food items fed to nestling songbirds. The number of insects a bird can eat is impressive; adult Baird's Sparrows have been estimated to collect 136 insects (mainly grasshoppers) per day to feed their young. A Swainson's Hawk was found to have eaten 230 crickets in one day.

Shorebirds eat insects from both upland and wetland habitats. Only birds of prey such as hawks, owls and Loggerhead Shrikes routinely eat rodents.

A pair of Ferruginous Hawks will kill approximately 500 ground squirrels (gophers), as well as jackrabbits and cottontails, in a single summer to feed themselves and their young. Although birds may not control large insect and rodent outbreaks after they have begun, they can suppress populations, keeping them below outbreak levels that require more active control by landowners. Many grassland birds will drink open water if it is available. However, most species don't require open water as their food is rich in moisture. Instead of water, dust is used to bathe, maintain their feathers, and rid themselves of external parasites.

Unlike many forest birds, the breeding and wintering ranges of most grassland birds are confined to North America. Of the many bird species covered in this manual, two species (Greater Sage and Sharp-tailed Grouse) are year-round residents in Canada. Four species winter only in the United States (e.g. Le Conte's Sparrow), 19 species winter in the southern United States and Mexico (e.g. Baird's Sparrow), and six species winter as far south as Brazil and Chile (e.g. Upland Sandpiper and Bobolink). The Bobolink migration has been called "one of the longest annual migrations of any New World songbird" with a round-trip distance of 20,000 km between breeding and wintering ranges. Researchers believe such long distance fliers use the earth's magnetic field to orient themselves, and use the stars in the night sky to pinpoint their location.

Grassland birds are integral parts of the prairie ecosystem and essential for its proper function. They help control insects and rodents, eat carrion and serve as food for other animals. Scientists are continually gathering new information about the habitat requirements of grassland birds and how they influence the lives of other organisms. Because of their importance in the prairie community, healthy populations of birds indicate a healthy environment. By conserving native prairie we are also conserving habitat for a variety of other organisms that depend on our remaining grasslands.

Management Options that have a Positive Influence on Grassland Bird Habitat

Conserve native prairie wherever possible. Native prairie is a valuable grazing resource for domestic livestock and is more nutritious and drought resistant than most tame forages. Native prairie is also the best habitat for grassland birds and a multitude of other organisms that we rarely see or notice. Once the native prairie is gone, it is lost forever.

Maximize the area of pasture under your management. Native prairie fragmented into smaller parcels may make the pasture less attractive to bird species that require larger areas of grassland. Converting adjacent cropland into perennial forage and incorporating it into a grazing system, will not only provide habitat for some grassland species, but may also increase the apparent area of the pasture making it more attractive for species that require large patches. However, avoid seeding invasive exotic forage species such as crested wheat grass and smooth brome grass next to native pastures. These species may invade native pasture and reduce range condition.

Manage your pasture wisely. Good grazing management of native prairie results in a healthy plant community that can produce forage every year. Set stocking rates to match pasture production in dry years, not wet years. Such conservative stocking rates will ensure an average of 40 to 50 percent of the grass is carried over each year to conserve moisture, protect the soil and roots, maximize growth for the next year and maintain a healthy, functioning grassland.

Average stocking rates result in uneven grazing intensity throughout the pasture. Preferred areas will be grazed very short while other areas of the pasture will be lightly grazed or not grazed at all due to distance from water, slope, or the presence of dead standing vegetation. This variation in grazing intensity throughout a well-managed pasture will provide the diversity of habitats required by grassland birds.

The impact of grazing on grassland bird habitat is influenced by climate, soil, topography, and the type and health of various plant communities on a pasture. In addition, producers control the effects of grazing by managing the timing, intensity and frequency of grazing. How producers manage grazing influences the productivity of the pasture in similar ways for both cattle and birds. The amount of control producers have over cattle distribution and pasture utilization, differs among grazing systems. Thus, bird responses may also differ among grazing systems. Some examples of grazing systems and their potential effects on grass and birds are listed in Table 1 . Keep in mind that in Table 1 grazing intensity is relative to the productivity of pasture in your region. Refer to Figure 1 for examples of species likely to occur under each management type.

Table 1. Effects of Grazing Management Options on Grass and Birds

Type	Intensity	Grass	Birds
Continuous – pasture grazed throughout season each year.	Heavy	Poor vigour, little litter or carry-over.	Short grass, bare ground specialists (Horned Lark).
Continuous - pasture grazed throughout season each year.	Light	Pasture ranges from heavily to lightly grazed portions, depending on cattle preference within the pasture. Poor distribution of grazing may reduce range condition over time.	A wide range of species depending on the vegetation at a specific location within the pasture.
Deferred / Complementary – spring grazing of tame pasture enables grazing of native pasture to be delayed until plants have completed most of their growth.	Moderate	Increased plant vigour, better utilization of available forage, less variation between preferred portions of pasture.	A range of species, but tending more toward those that prefer intermediate grass height and density.
Rest-rotation – at least three pastures are used. In a given year, one pasture is rested while the remaining pastures are grazed in rotation.	Moderate - heavy	Increased plant vigour, excellent utilization of available forage, risk of overgrazing.	Grazed pastures provide habitat for species preferring short grass, rested pastures may be used by species requiring intermediate grass. Birds requiring tall, dense vegetation may not find suitable habitat.
Winter – forage is stock-piled during the summer and the pasture is grazed when plants are dormant.	Moderate	Good plant vigour, may be moisture loss if carry-over reduced. Same as for deferred.	Same as for deferred.
No grazing (long term)	None	Reduced grass vigour, encroachment by woody species in some regions.	Where woody species encroach, grassland habitat quality is degraded. Habitat may be used by a different group of birds.

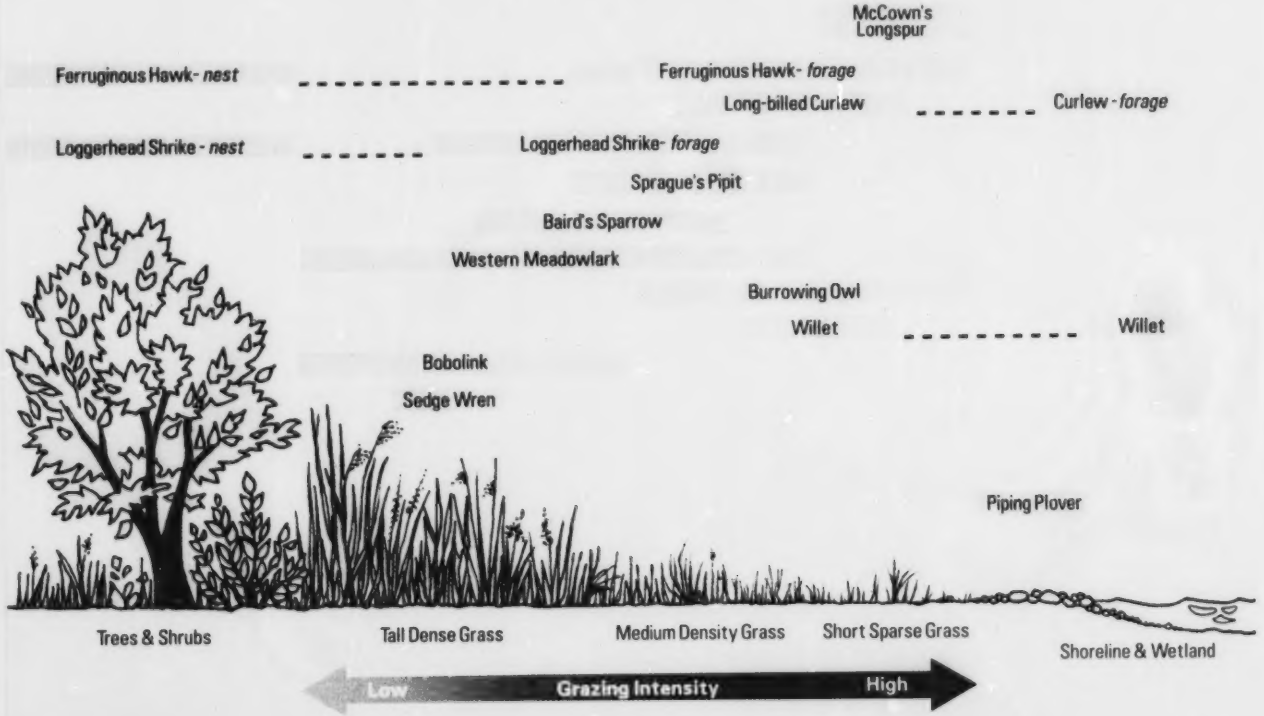
Use a flushing bar or similar device attached to your tractor when haying to flush birds and other animals out of the path of the machine. Although most nests active at the time of haying will be destroyed, adults will survive to breed again the next year or later on in the same year. Although most birds finish nesting by mid-July, continued use of the flushing bar will help young birds and other animals get out of the way.

Avoid planting trees and shrubs in areas of your land where they don't normally occur. Trees and shrubs are a natural part of the prairie ecosystem, but usually occur in coulees or around wetlands. Trees and shrubs planted in upland areas may attract nest predators such as crows and brood parasites such as Brown-headed Cowbirds that could impact other birds nesting nearby. Trees and shrubs in their natural locations provide nesting and foraging habitat for bird species such as Loggerhead Shrike and Sharp-tailed Grouse.

Avoid draining sloughs and potholes, and consider installing remote watering systems. Besides being a valuable source of water for cattle, sloughs and potholes on your property help maintain ground water levels, filter residue from sheet water runoff, and provide habitat for many species of wildlife. Remote watering systems can increase ease of access for cattle, and increase cattle weight gain by maintaining higher water quality over the summer. The increased vegetation in and around freshwater wetlands that is promoted by remote watering is also good for many bird species.

Figure 1. Habitat Associations of Selected Grassland Birds

Grass grows taller and denser in areas that receive more moisture and have better quality soil. In contrast, consumption of grass by grazing cattle reduces the height and density of grass. Soil, moisture and grazing intensity combine resulting in diverse grass conditions suitable for different species. The bars in this figure represent the habitats with which each bird species associates. For example, some grassland birds are associated with tall, dense grass (e.g. Bobolinks), while others prefer short, sparse grass (e.g. McCown's Longspur). Ferruginous Hawks nest in trees but forage over a wider range of vegetation height and density. Areas with grass ranging from short to tall provide suitable conditions for the entire grassland bird community.

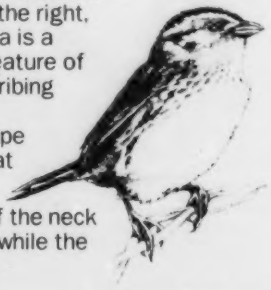


The information and illustrations on this page are intended to help you understand the bird's distinguishing field marks, food preference, range in Saskatchewan and the preferred vegetation zones. Please refer to this information as you read the guide.

Key Identification Features

Short angled lines like the ones shown on the bird at the right, indicate that this area is a distinct identifying feature of this bird. Words describing this feature will be highlighted in **bold** type within the copy of that bird species page.

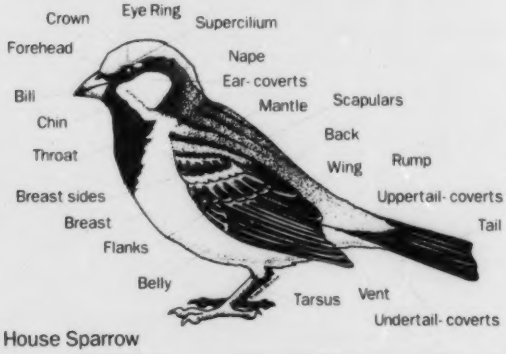
Example: The **nape** of the neck on the male is black, while the **throat** is pale yellow.



Le Conte's Sparrow

Identification Chart

This chart outlines the main body areas that are used to identify and describe individual bird species.



House Sparrow

Species Range Map

Gold shaded areas indicate the breeding range of each bird species in Saskatchewan.

Bird Diet Icons

These symbols outline the basic diet of each bird species. Diets will vary depending upon the season.

Seeds - Includes grain, grass & forb seeds

Fruit - Includes fruit & berries

Aquatic Invertebrates - Includes brine shrimp, aquatic insects, crayfish and snails

Insects - Includes beetles, crickets, grasshoppers & spiders

Fish - Includes minnows & all small fish

Small Vertebrates - Includes amphibians and reptiles.

Birds - Includes other birds and their eggs or young

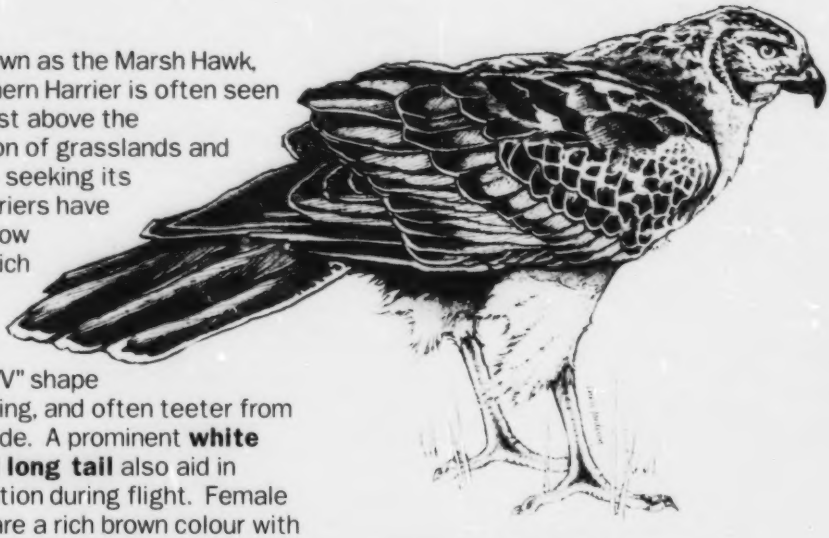
Small Mammals - Includes mice, voles, ground squirrels, rabbits and other rodents

Saskatchewan Vegetation Zones

GRASSLAND PARKLAND FOREST

There are 3 main vegetation areas in Saskatchewan.

Northern Harrier (*Circus cyaneus*)



Once known as the Marsh Hawk, the Northern Harrier is often seen gliding just above the vegetation of grasslands and wetlands seeking its prey. Harriers have long, narrow wings which are held in an upward pointing "V" shape while gliding, and often teeter from side to side. A prominent **white rump** and **long tail** also aid in identification during flight. Female Harriers are a rich brown colour with heavily streaked breasts, whereas males are mostly white on their undersides and light silver-grey on the back of their body and wings.

Northern Harrier populations likely have been reduced from historic levels due to cultivation and egg-shell thinning related to pesticides. In some areas of the United States harriers have disappeared altogether from their historic range. Harriers are still relatively common in southern Saskatchewan despite the fact that populations have been declining by approximately 2% per year over the last 35 years.

The harrier winters from southern Canada to Mexico and to Columbia and Venezuela in South America.

Northern Harriers are common breeders throughout the grasslands and parklands of southern Saskatchewan. Although harriers frequently forage along grass ditches in cropland dominated landscapes, areas with more extensive grassland or wetland margins likely provide more foraging habitat. They nest on the ground in habitats providing tall and dense vegetation, such as hayfields, snowberry patches and wetland margins.

Harriers lay four to nine bluish-white eggs.

Female harriers are larger than males, and will aggressively defend foraging territories from males during the non-breeding season.

The oldest recorded Northern Harrier in the wild was 16 years and five months.

Swainson's Hawk (*Buteo swainsoni*)

The Swainson's Hawk is a common resident of the grasslands of southern Saskatchewan. It is readily identified by its dark back, head and tail and a **brown bib** that extends down the front of the breast. Some birds have much darker plumage than others which makes identification challenging. The Swainson's Hawk may be identified in flight by the dark trailing edge of the wings and tail, and the wings held in a slight upward "V" shape while gliding.

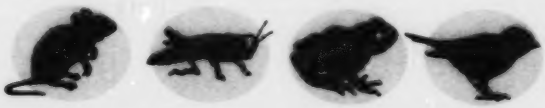
Since settlement by Europeans, Swainson's Hawk populations have declined across much of its range due to factors such as persecution and habitat loss. Recently, mortality due to pesticide poisoning has been documented on the wintering grounds in Argentina, with up to 20,000 birds estimated to have died in one season. Populations in Saskatchewan have declined over the last 15 years.

Swainson's Hawks typically nest in scattered trees within grassland, shrubland or cropland landscapes that support healthy populations of Richardson's Ground Squirrels (commonly known as gophers), its main prey item. Extensive cropland likely provides less foraging habitat for Swainson's Hawks than areas with perennial grasses, and while ditches and road rights-of-way also provide foraging habitat, birds in these areas are susceptible to vehicle collision.

Active Swainson's Hawk nests should be given a berth of several hundred meters as incubating adults may desert if overly disturbed.

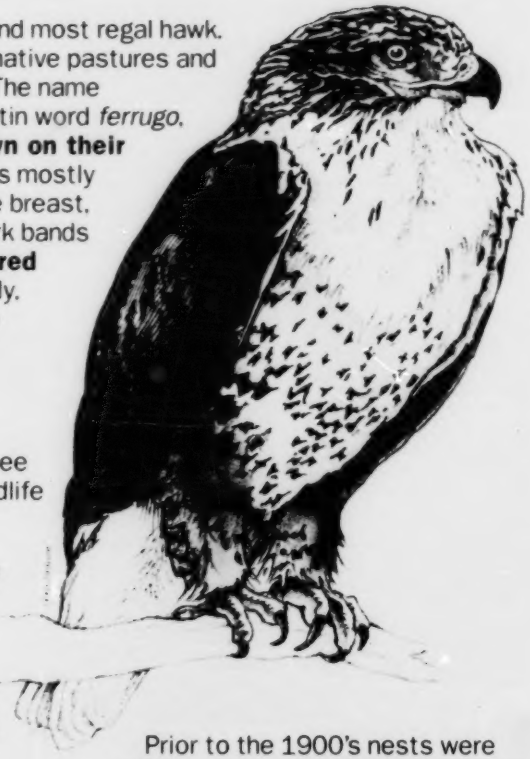
Flocks of over 800,000 Swainson's Hawks form over Mexico during the 10,000 km migration to the wintering grounds.

Winters mainly in Argentina.



Ferruginous Hawk (*Buteo regalis*)

This is North America's largest and most regal hawk. It is typically seen soaring over native pastures and is often mistaken for an eagle. The name "Ferruginous" comes from the Latin word *ferrugo*, meaning rust, for the **rusty brown on their shoulders, back, and legs**. It is mostly white under the wings and on the breast, belly and tail (which lacks the dark bands of other hawks). The **rust-coloured legs** contrast with the white body, appearing as a dark "V" when the bird is flying overhead.



Currently listed as "Species of Special Concern" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The designation indicates that the species is vulnerable because of low or declining numbers due to human activities or natural events. According to the Atlas of Saskatchewan Birds there are an estimated 1000 breeding pairs in the province.

This hawk depends on the native prairie ecosystem that has become increasingly rare and fragmented, largely due to conversion to agriculture. Ferruginous Hawks appear to require a combination of at least three habitat components: grassland, ground squirrels, and elevated nest sites. However, these hawks are sometimes absent in some highly cultivated regions, even though all three components appear to be present.

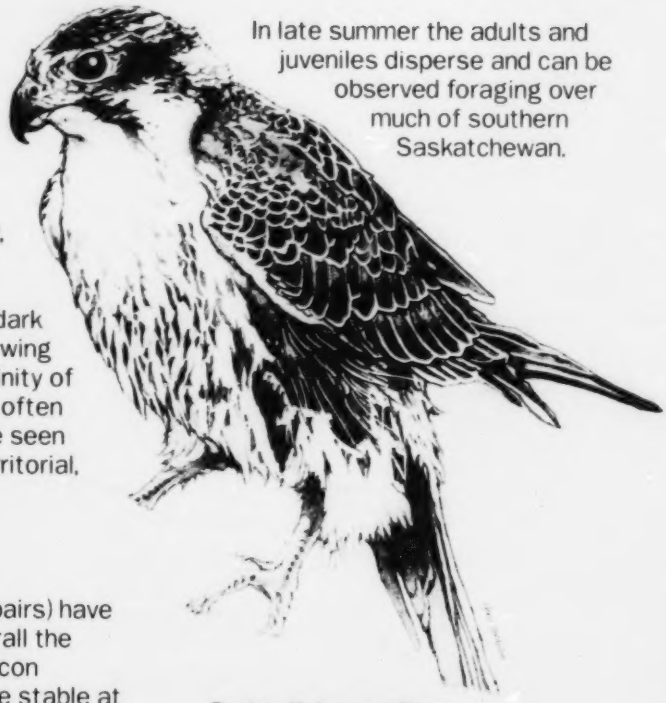
Prior to the 1900's nests were often constructed with bison bones and lined with bison fur and dung. Nests today are made of dried sticks and lined with bark and cow dung. During the 32 day incubation period the male feeds the female on the nest to ensure the eggs are always attended.

The female broods the nestlings for three weeks, and young are ready to leave the nest by late June or early July.

Winters mainly from south-western U.S. to central Mexico.

Prairie Falcon (*Falco mexicanus*)

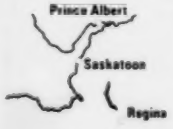
This fast flying falcon of the arid regions of western North America has a pale brown back, creamy white and streaked under parts. Slightly larger than a crow, the Prairie Falcon may be identified in flight by its sharp pointed wings, and dark patches underneath each wing at the "arm pit". In the vicinity of a nest Prairie Falcons are often heard long before they are seen because they give loud territorial, courtship and alarm calls.



In late summer the adults and juveniles disperse and can be observed foraging over much of southern Saskatchewan.

Although populations in Saskatchewan (25 to 50 pairs) have experienced declines, overall the North American Prairie Falcon population is thought to be stable at 5,000 to 6,000 breeding pairs.

Prairie Falcons breed in areas with extensive grassland wherever cliff faces are available nearby for nesting. South-facing cliffs may be preferred for nesting, as are sites with overhangs. In Saskatchewan suitable areas for Prairie Falcons include river breaks along the South Saskatchewan River, and badlands in the Big Muddy, Frenchman River, and Cypress Hills regions.



This falcon winters from south-western Canada to central Mexico.

Prairie Falcons often forage by "strafing", or flying fast 3 to 6 m above the ground and surprising prey on the ground. Prairie Falcons are vulnerable to collisions with fences and telephone wires on account of these low level flights.

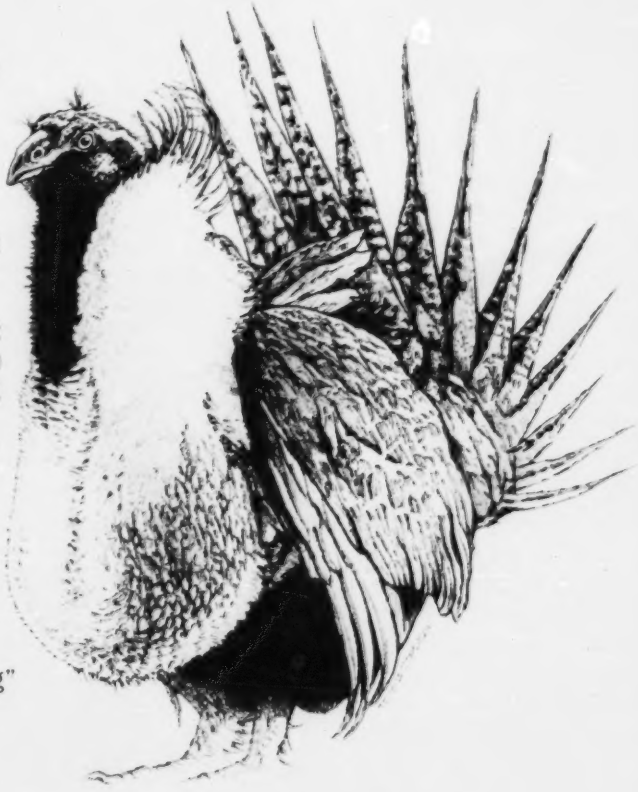
While ground squirrels are an important food source for Prairie Falcons during the breeding season, Horned Larks and Western Meadowlarks are often eaten during the winter.

Female Prairie Falcons weigh almost twice as much as males.

Prairie Falcons have been described as more of a "wanderer" than a true "migrant" as few individuals fly directly south to their wintering areas.

Greater Sage-Grouse (*Centrocercus urophasianus*)

The large size and dramatic courtship display of the Greater Sage-Grouse make it one of the most striking birds in North America. Male grouse have **white chests**, a black patch on their bellies and **long pointed tails**. They also have a **yellowish spot** above their eyes much like a Sharp-tailed Grouse. During courtship displays males congregate at leks or strutting grounds where they fan their tails and swell up their chests exposing two olive/green patches of balloon-like skin that are repeatedly filled and emptied of air making a series of "plopping" noises.



This species was listed as endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in 1998, and in the Saskatchewan Wildlife Act in 1999. The Saskatchewan Greater Sage-Grouse population declined from an estimated 2000-3000 birds in 1987 to 250 in 1997, before increasing to approximately 550 birds in 1999. The number of active leks in Saskatchewan has also decreased from 44 in 1987 to 12 in 1999. Low survival of juveniles is thought to be one of the most important limiting factors on Greater Sage-Grouse populations.

Saskatchewan represents the northern edge of the Greater Sage-Grouse range in North America. Greater Sage-Grouse live year-round in short grass prairie with abundant sagebrush, which the grouse depend on as a source of food and shelter. Adult Greater Sage-Grouse eat the leaves and buds of sagebrush, although during spring and summer both adults and young regularly eat insects. In years with heavy snow the birds seek out coulee sides with a south-western exposure where the snow is not as deep.

Range extends south from Canada to Colorado and west to California.

Males begin displaying or strutting on dancing areas called "leks" in mid-March with most activity occurring at dawn and dusk. Females do not begin visiting the leks until April. The average number of males per lek varies between 14 and 70, with some large leks in the United States having hundreds of males. Very few of the male Greater Sage-Grouse at a lek are selected as mates by females. From one to three of the most dominant males occupying the centre of the lek mate with 50 - 85 percent of the females.

Female Greater Sage-Grouse lay 4-15 eggs, and incubate and care for the chicks without help from the male.

Most chicks hatch during the first two weeks of June after 25 - 29 days of incubation.

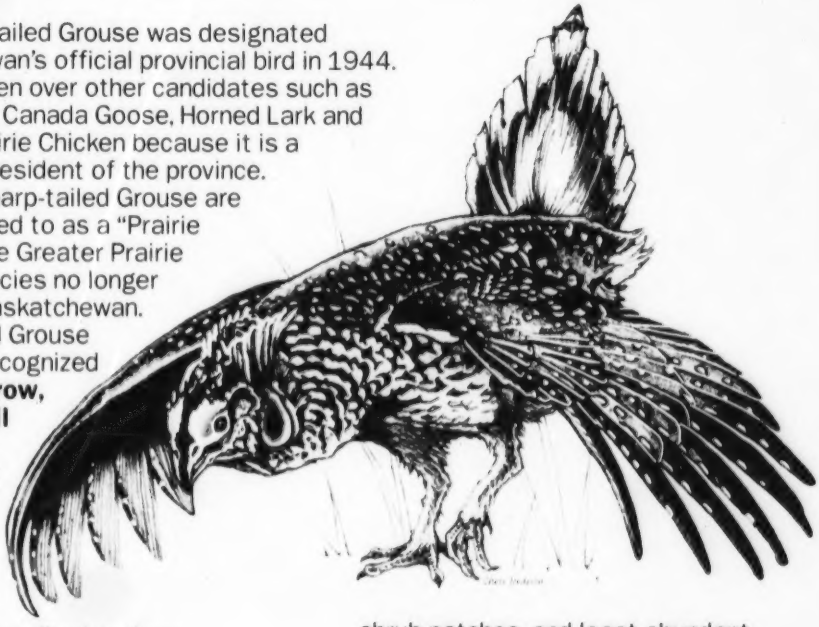
For the first 12 weeks of life, Greater Sage-Grouse chicks eat ants, beetles, grasshoppers and soft green plants before switching to sagebrush leaves.

Disturbance, such as mining activity and oil wells, may disrupt nesting and courtship displays.

Silver Sagebrush
(Artemisia cana)

This is a many-branched shrub with gnarled, twisted stems and shred-like bark. It is very common on lighter soils but rare in parkland areas. It has a deep, penetrating taproot. Silver leaves display hair on both sides and are occasionally toothed at the end. This plant is not palatable for cattle but is an important browse for Pronghorn Antelope and Greater Sage Grouse.

Sharp - tailed Grouse *(Tympanuchus phasianellus)*



The Sharp-tailed Grouse was designated Saskatchewan's official provincial bird in 1944. It was chosen over other candidates such as the Mallard, Canada Goose, Horned Lark and Greater Prairie Chicken because it is a year-round resident of the province. Although Sharp-tailed Grouse are often referred to as a "Prairie Chicken", the Greater Prairie Chicken species no longer occurs in Saskatchewan. Sharp-tailed Grouse are easily recognized by their **narrow, pointed tail feathers with white edges.** Their feet are rather short and covered with feathers, allowing them to keep warm while walking on top of the snow.

This is a hardy bird that is well equipped to survive the cold prairie winters. A hunting season is held every year in Saskatchewan and is open to residents and non-residents alike. Although its population size in the province is unknown, populations appear to be relatively stable.

Range extends from northern U.S. to the Northwest Territories.

Sharp-tailed Grouse are most abundant in lightly grazed pastures with shrub patches, and least abundant in intensively cultivated or heavily grazed sites. In the parkland, they favor brush and aspen groves and may be seen regularly along edges of forest clearings near grain fields. Favorable winter habitat consists of shrubby wooded areas where buds are available, and grassy areas that supply seeds.

Each spring the males gather on their traditional leks or dancing grounds to perform their breeding ritual. Males shake their tails while they dance about in circles with their wings outstretched. They also inflate their large purple neck sacs and utter low "cooing" and "popping" sounds. These elaborate courtship displays are mimicked in many First Nations' dances.

The hens are attracted to the lek and typically only a few dominant males do the mating. These males tend to defend the territories located toward the centre of the lek.

Competition for territories between males is intense with most fights preceded by bluff attacks and rushes. Although fights rarely end in bloodshed, occasionally males are mortally wounded.

Following breeding, the hen lays 10-12 olive-brown eggs in a nest hidden in tall grasses or near shrubs.

Incubation lasts for 21-23 days.

After hatching, mother and young move to open grassy areas to feed, and may be seen roosting in trees on hot days.

At 8 - 10 weeks the broods disperse.

In the fall and winter the males again move to dancing grounds where young birds display and compete for territories.

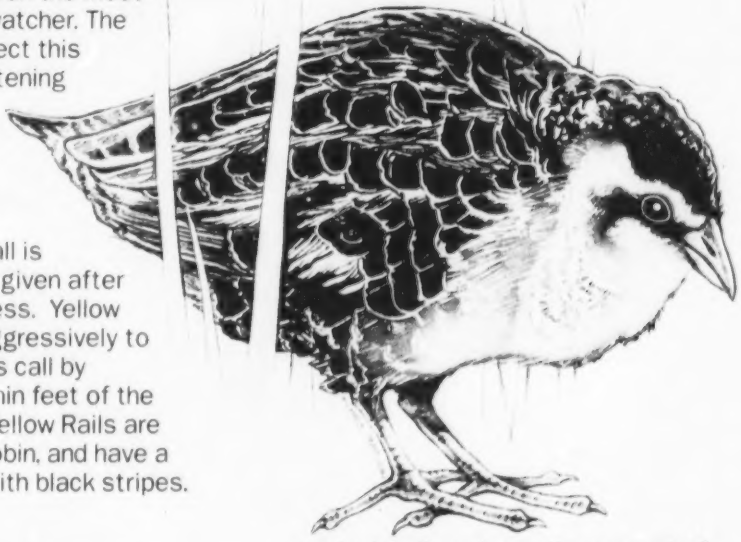
In November, Sharp-tailed Grouse flock together to spend the winter in large groups.

Western Wheatgrass
(*Agropyron smithii*)

Also referred to as "bluejoint," this grass is easily identifiable by its stiff blue-green leaves which attach to the stem at a 40° angle. A highly adaptable grass, it is especially common in low-lying areas on heavy alkaline or clay soils, and is drought -tolerant.

Yellow Rail (*Coturnicops noveboracensis*)

This secretive marsh bird is rarely seen by even the most dedicated bird watcher. The best way to detect this species is by listening for the male's call, a series of five clicks that sound like two pebbles tapped together. This call is most frequently given after complete darkness. Yellow Rails respond aggressively to imitations of this call by approaching within feet of the sound source. Yellow Rails are smaller than a robin, and have a yellowish back with black stripes.



Yellow Rails are listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as vulnerable in Saskatchewan. Population size and trend are unknown for this species due to its secretive behaviour. Yellow Rail abundance likely varies greatly between years due to changes in wetland conditions. Habitat loss and human development are threats to the Yellow Rail.

Across the Canadian prairie provinces Yellow Rails select large grassy marshes, wet meadows and flooded pastures for breeding. It appears that Yellow Rails occur wherever wetland conditions are favourable, but are absent from drought-stricken areas. Drainage of wetlands undoubtedly reduces the amount of habitat available for this species.

Yellow Rails build their nest under a canopy of vegetation using grasses and sedges. Eight eggs are laid and hatch after 18 days of incubation. Young rails are completely black with a bright pink bill, and are led from the nest by the female within a day of hatching, often to another nest nearby.

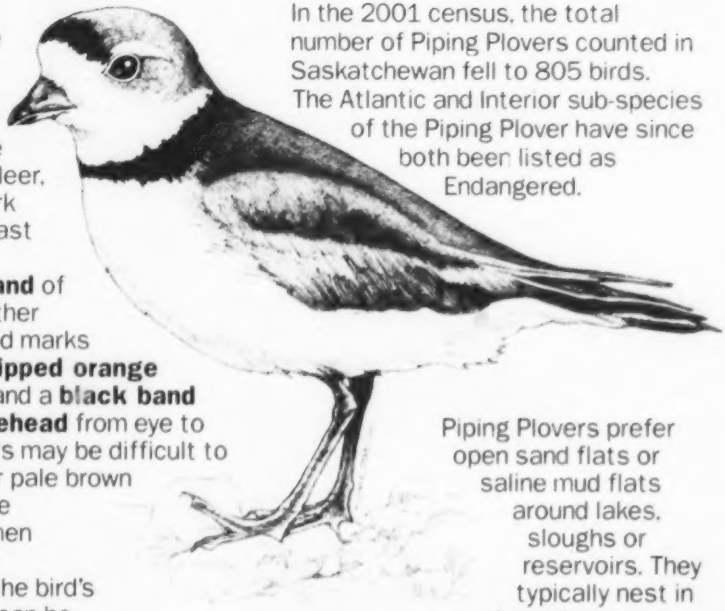
Yellow Rails migrate at night when tail winds are favourable.

Yellow Rail remains have been found in Rancholabrean tarpit deposits 400,000 years old.

Winters along the coast from North Carolina to southern Texas.

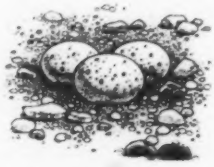
Piping Plover (*Charadrius melodus*)

Male and female Piping Plovers are similar in size and colour. They often are confused with the more familiar Killdeer, which has two dark stripes on its breast compared to the **single breast band** of Piping Plovers. Other distinguishing field marks include a **black-tipped orange bill**, orange legs and a **black band across their forehead** from eye to eye. Piping Plovers may be difficult to see because their pale brown plumage and white breast and abdomen blends in with the shoreline. Often the bird's *"peep-lo"* whistle can be heard before the bird is seen.



In the 2001 census, the total number of Piping Plovers counted in Saskatchewan fell to 805 birds. The Atlantic and Interior sub-species of the Piping Plover have since both been listed as Endangered.

Piping Plovers prefer open sand flats or saline mud flats around lakes, sloughs or reservoirs. They typically nest in the open among small pebbles on the beach.



Piping Plovers began to decline in the 1940s and were listed as Threatened in 1978 by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). As the population continued to decline, its status was changed to endangered in 1985. During the 1996 international census, surveyors recorded 1,384 birds in Saskatchewan, which comprised approximately 23 percent of the world population.

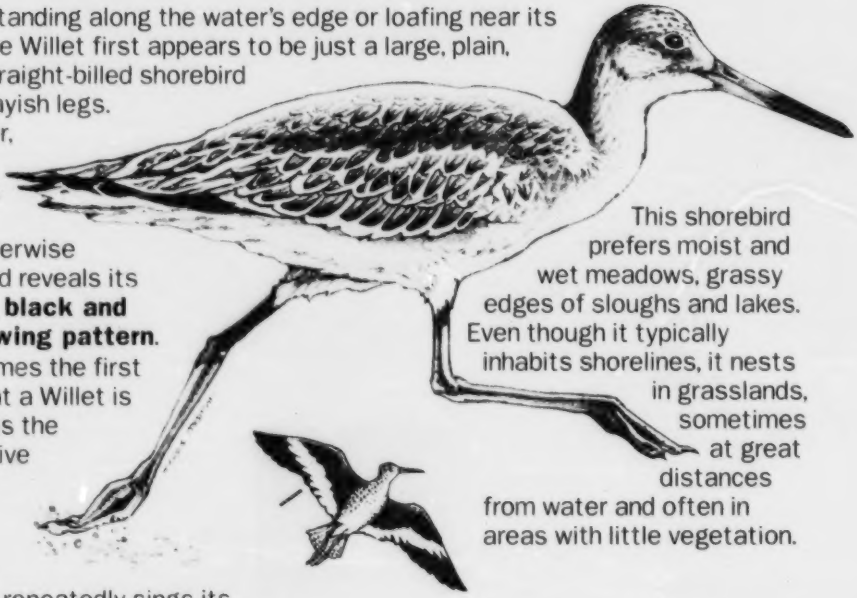
Most of these birds winter in the southern U.S. along the Gulf of Mexico, particularly the coastal areas of Texas. Some birds also overwinter in Mexico and on a few Caribbean islands.

Some of the largest concentrations of breeding pairs occur at Big Quill Lake, Chaplin Lake, Willowbunch Lake, Lake Diefenbaker and Manitou Lake.

The female usually lays four buff-coloured, black-spotted eggs. Eggs are well camouflaged and resemble small spotted pebbles. On average, one egg is laid every two days.

Like most shorebirds, Piping Plovers are long-lived. Several birds in one study area were 8-11 years of age. The record is 16 years.

Willet (*Catoptrophorus semipalmatus*)



When standing along the water's edge or loafing near its nest, the Willet first appears to be just a large, plain, gray, straight-billed shorebird with grayish legs. However, when it takes flight this otherwise drab bird reveals its striking **black and white wing pattern**. Sometimes the first clue that a Willet is nearby is the distinctive sound of its loud call, in which it repeatedly sings its name *"pill-willet"*. They are usually seen singly or in pairs when nesting, but even before the young are fully grown, adults mass in large flocks to migrate south. They breed in uplands, preferably native prairie, and forage in nearby shallow wetlands, marshes and lake shores.

This shorebird prefers moist and wet meadows, grassy edges of sloughs and lakes. Even though it typically inhabits shorelines, it nests in grasslands, sometimes at great distances from water and often in areas with little vegetation.

Willet populations, like other shorebird species, have been reduced in numbers over the years because of habitat loss due to drainage of marshes and sloughs and conversion of rangeland around wetlands to crop land. However, there are still good numbers throughout the grasslands and parklands of Saskatchewan.

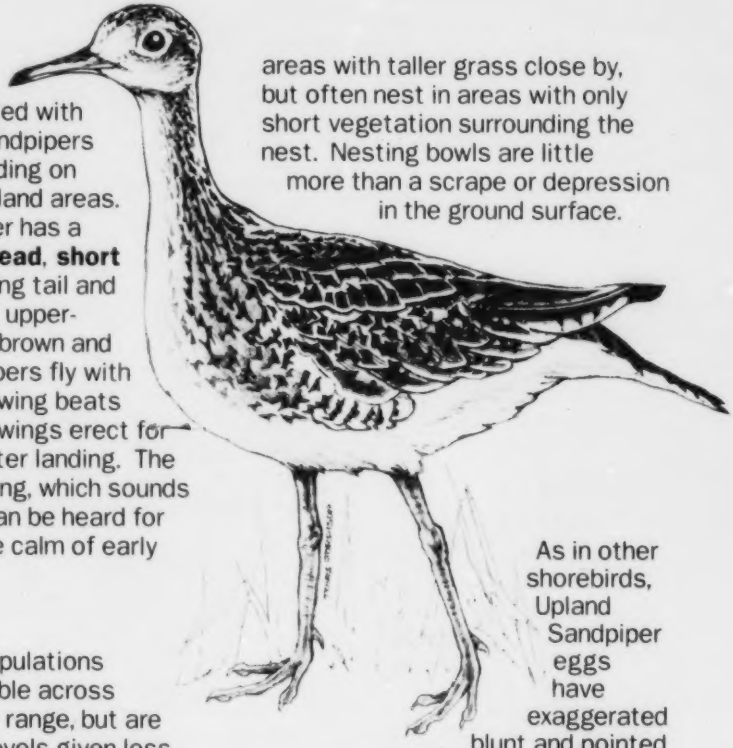
Willets are very aggressive during the brooding period. When they are nesting, however, they are rarely seen, except when they are foraging for food. They will often defend their territory during courtship with flight displays in which they fly in circles flapping their wings in short downward beats.

Willets arrive in Saskatchewan from their wintering grounds in late April and begin courtship ceremonies soon after.

Normally four eggs are laid with both parents sharing equally in incubation. Incubating adults are very well camouflaged and often refuse to leave the nest in the presence of humans.

Winters along the coastal areas from southern U.S. south to Peru and Brazil.

Upland Sandpiper (*Bartramia longicauda*)



One of the few shorebirds that is not closely associated with wetlands, Upland Sandpipers are often seen standing on fenceposts in grassland areas. The Upland Sandpiper has a **long neck**, **small head**, **short bill**, and relatively long tail and legs, with under- and upper-parts streaked with brown and buff. Upland Sandpipers fly with very stiff, fluttering wing beats and often hold their wings erect for several moments after landing. The Upland Sandpiper song, which sounds like a wolf whistle, can be heard for long distances in the calm of early prairie mornings.

Upland Sandpiper populations currently appear stable across much of its breeding range, but are lower than historic levels given loss of grassland habitat to cultivation. In the Canadian prairies, numbers have declined greatly over the past 50 years. Upland Sandpipers become less abundant in western Saskatchewan, reflecting the drier climate.

Winters on the grasslands of southwestern Brazil, Paraguay and Argentina.

Upland Sandpipers mostly prefer grassland habitats such as native pasture, but will use tame pastures, hay lands and the dry margins of wetlands. They generally prefer areas with taller grass close by, but often nest in areas with only short vegetation surrounding the nest. Nesting bowls are little more than a scrape or depression in the ground surface.

As in other shorebirds, Upland Sandpiper eggs have exaggerated blunt and pointed ends, with the blunt ends facing slightly upwards in the nests to contact the brood patch (bare skin) of the incubating parent.

The young are able to walk soon after hatching and leave the nest within a day or two.

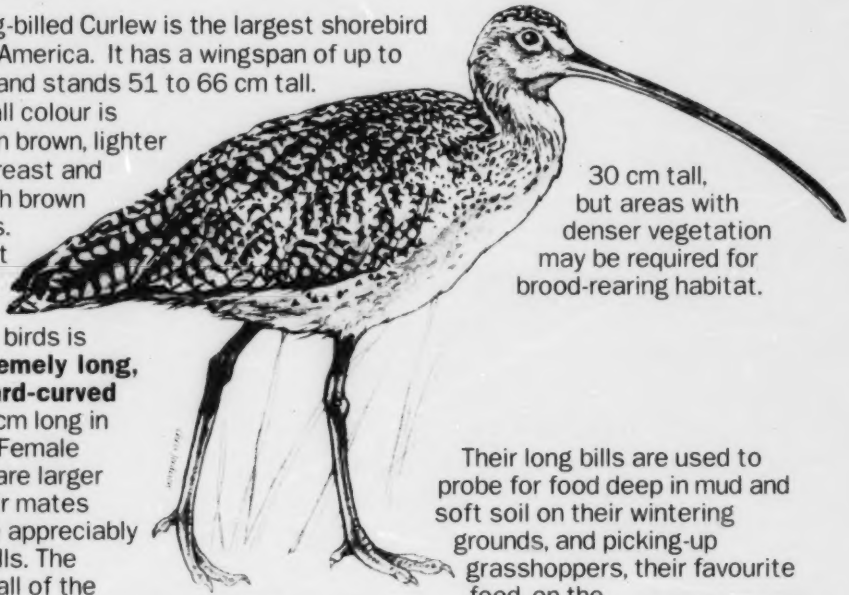
Upland Sandpipers forage mostly on insects and seeds.

Upland Sandpipers are occasionally parasitized by Brown-headed Cowbirds.

In the 1880s Upland Sandpipers were heavily harvested by market hunters after Passenger Pigeon populations had crashed from over-hunting.

Long - billed Curlew (*Numenius americanus*)

The Long-billed Curlew is the largest shorebird in North America. It has a wingspan of up to 100 cm and stands 51 to 66 cm tall. Its overall colour is cinnamon brown, lighter on the breast and belly, with brown markings. The most striking feature of these birds is the **extremely long, downward-curved bill** (23 cm long in adults). Female curlews are larger than their mates and have appreciably longer bills. The typical call of the curlew is a loud "*cur-lew, cur-lew*" repeated several times.



30 cm tall, but areas with denser vegetation may be required for brood-rearing habitat.

Their long bills are used to probe for food deep in mud and soft soil on their wintering grounds, and picking-up grasshoppers, their favourite food, on the breeding grounds.

An adult Long-billed Curlew may not begin to breed until it is three years old or more.

Curlews lay four brown eggs that are marked with small black splotches in a scrape nest that is lined with fine grasses. Nesting begins in late-May and early-June. Incubation is shared by both parents and lasts approximately 28 - 32 days.

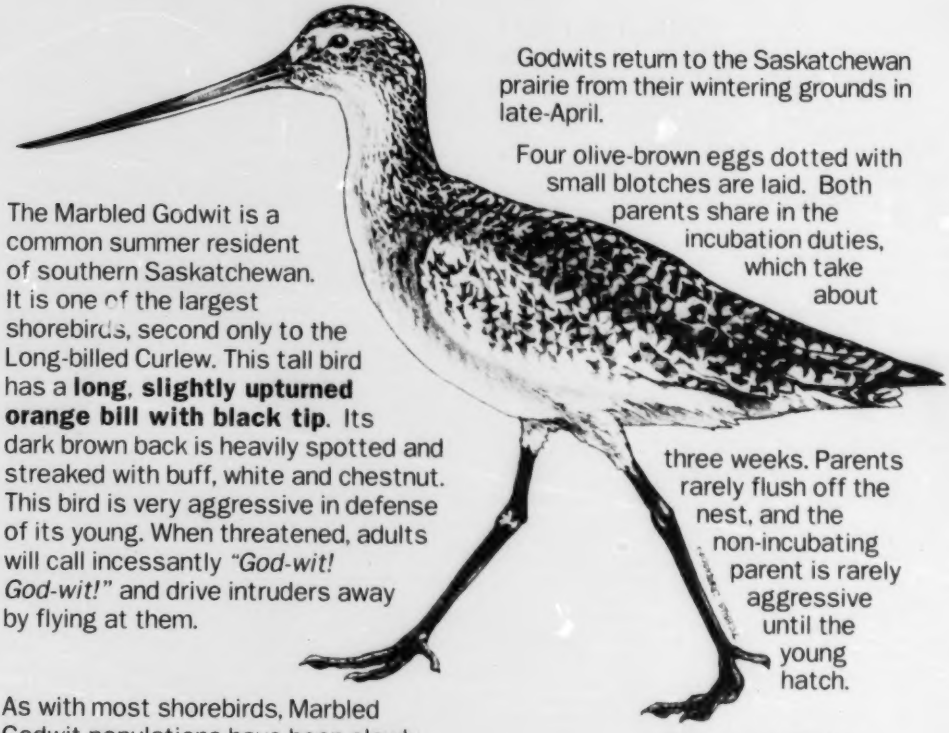
The young generally hatch within four to five hours of each other. As with most other shorebirds, the young are able to leave the nest and begin feeding within hours of hatching.

Long-billed Curlews are listed as vulnerable by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

Curlews in Saskatchewan typically nest in dry upland prairie that may be near or at some distance from wetlands. In the latter part of the season, they may also be found in fallow and stubble fields. They prefer short vegetation, and nest where the cover is less than

This species winters along the California coast south to Mexico including the Baha Peninsula, and also on the Texas and Mexico Gulf Coast.

Marbled Godwit (*Limosa fedoa*)



The Marbled Godwit is a common summer resident of southern Saskatchewan. It is one of the largest shorebirds, second only to the Long-billed Curlew. This tall bird has a **long, slightly upturned orange bill with black tip**. Its dark brown back is heavily spotted and streaked with buff, white and chestnut. This bird is very aggressive in defense of its young. When threatened, adults will call incessantly *"God-wit! God-wit!"* and drive intruders away by flying at them.

Godwits return to the Saskatchewan prairie from their wintering grounds in late-April.

Four olive-brown eggs dotted with small blotches are laid. Both parents share in the incubation duties, which take about three weeks. Parents rarely flush off the nest, and the non-incubating parent is rarely aggressive until the young hatch.

As with most shorebirds, Marbled Godwit populations have been slowly declining due to loss of grassland and wetland habitat, but are still frequently observed in southern Saskatchewan.

Nests are often located up to a kilometer from wetlands. Tall dense vegetation is usually avoided by Marbled Godwits, and they appear to prefer native to tame grassland for nesting. The birds forage in shallow wetlands or along the margins of lakes that have short, sparse vegetation.

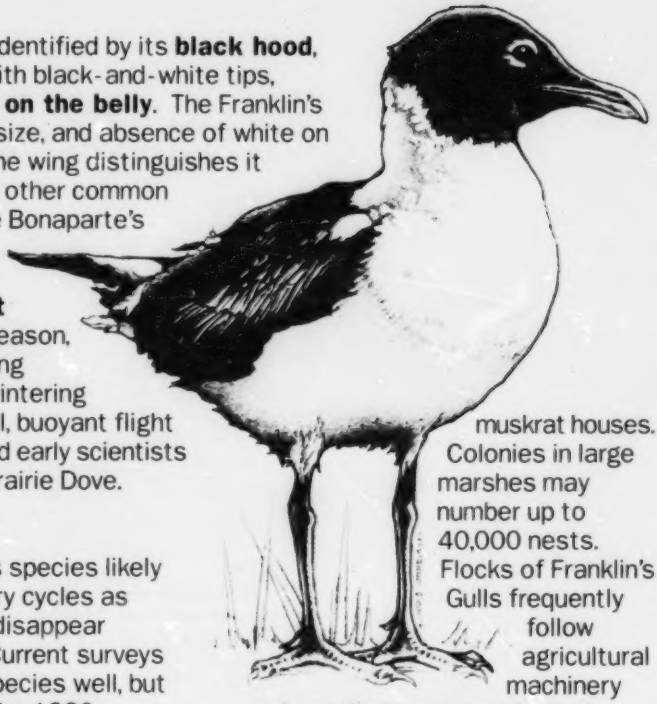
The young fledge about a month after hatching. They head south to their wintering grounds by mid-to-late September. As in most shorebirds, adults migrate south several weeks before the young of the year, which follow later.

Unlike most other shorebirds, Marbled Godwits feed almost exclusively on aquatic plant tubors during migration.

The oldest known Marbled Godwit was at least 29 years old when last seen.

Its wintering area includes the Atlantic, Pacific and Gulf coasts of the U.S. and Mexico.

Franklin's Gull (*Larus pipixcan*)



The Franklin's Gull is identified by its **black hood**, **slate grey wings** with black-and-white tips, **and white feathers on the belly**. The Franklin's Gull's **red bill**, larger size, and absence of white on the leading edge of the wing distinguishes it from Saskatchewan's other common black-headed gull, the Bonaparte's Gull. Franklin's Gulls also have a touch of **pink on their breast** during the breeding season, presumably from eating crustaceans on the wintering grounds. The graceful, buoyant flight of the Franklin's Gull led early scientists to refer to it as the Prairie Dove.

The population of this species likely varies with wet and dry cycles as marshes appear and disappear across the prairies. Current surveys do not monitor this species well, but the wet summers of the 1990s appear to have resulted in increased breeding populations at a number of sites in the United States. Disturbance of nesting colonies by humans may result in desertion by nesting adults, or drowning of young chicks frightened from the nest.

The Franklin's Gull nests in marshes of the grasslands and southern forests of the Canadian prairie provinces and northern portions of the western United States. As prairie marshes dry up, breeding colonies often shift between marshes in different years. Nests are built on a platform of floating vegetation, or sometimes on muskrat houses. Colonies in large marshes may number up to 40,000 nests. Flocks of Franklin's Gulls frequently follow agricultural machinery and eat the insects, grubs and earthworms exposed by cultivation.

The first specimen of this species was collected in 1823, probably on the Saskatchewan River, while Sir John Franklin's first expedition travelled overland to the Arctic.

Occasionally American Coots will lay eggs in Franklin's Gull nests.

Flocks estimated at 2.5 million Franklin's Gulls have been observed at a few key migratory and wintering areas.

Winters along the coastal areas of Louisiana and Texas and south to Guatemala, Panama, Peru and Chile.

Black Tern (*Chlidonias niger*)

The Black Tern is a common waterbird of the northern Great Plains, but is most abundant in the fertile sloughs and marshes of the Canadian prairies. During the breeding season, this small tern is **mostly black** with a gray back and wings and white undertail feathers. It eats insects as well as fish. The Black Tern has been described as a "restless waif, flitting about hither and thither with a wayward, desultory flight, light and buoyant as a butterfly."

Black Tern populations have been declining for the past 30 years in Canada. Loss and degradation of wetlands on the breeding grounds and throughout its migration route have likely contributed to these declines.

Black Terns nest on shallow freshwater marshes with emergent vegetation, including prairie sloughs, margins of lakes and occasionally river or island edges. During the breeding season adults spend much time foraging over wetlands for insects and small fish, but also forage over upland habitats such as pasture and cropland as they commute between wetlands.

Black Terns nest in loose colonies and typically lay three eggs on mats of floating vegetation or old muskrat houses. These are flimsy and are easily destroyed by wind or changing water levels.

Both sexes incubate the eggs, and change places frequently, taking short shifts of just 30 to 60 minutes.

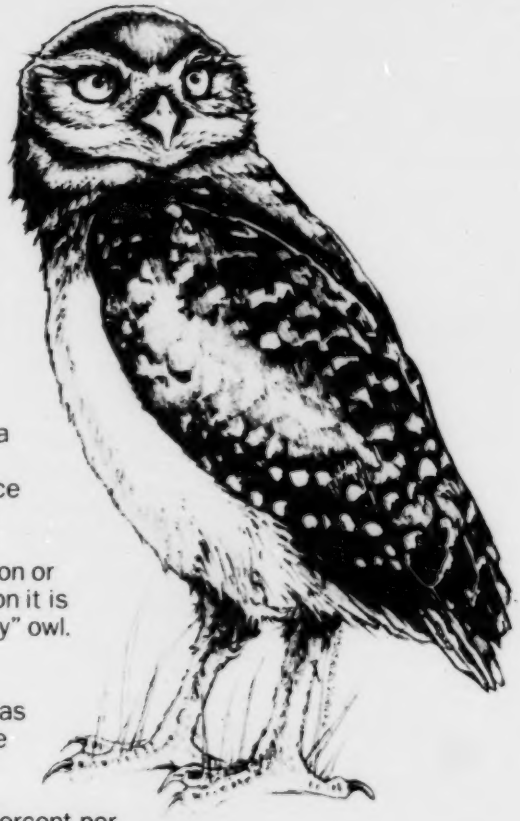
When the chicks hatch after three weeks of incubation, both adults brood and feed the young and are very aggressive towards intruders.

Dragon flies, grasshoppers and fish flies are among the favorite foods of Black Terns during the breeding season.

On the wintering grounds Black Terns often rest on drifting coconuts or basking Sea Turtles far offshore in the ocean.

Winters along the coastal areas of northern South America.

Burrowing Owl (*Athene cunicularia*)



This small ground-dwelling owl is easily identified by its round head, **white eyebrows**, yellow eyes and long, **stilt-like legs**. Adult owls are sandy-colored and have barring on the breast and sometimes on the belly. Both males and females are the same size. The female tends to be darker brown than the male as she spends much of her time in the burrow incubating her eggs. The male, usually outside the burrow during this period, is subject to bleaching from the sun making it a little lighter. The Burrowing Owl is almost always seen sitting on a fence post or at the entrance of a burrow. When flying after being disturbed it usually lands and "bobs" at the person or thing that disturbed it. For this reason it is sometimes referred to as the "howdy" owl.

In 1995, Burrowing Owls were listed as endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) because of alarming population declines of 22 percent per year in the past decade and a shrinking distribution. Burrowing Owls are rarely found in Manitoba and populations on the Regina Plains in southern Saskatchewan have declined by 95 percent since the mid-1980's.

Burrowing Owls prefer dry, open, treeless plains and pastures with short grass for nesting, but will forage over areas with taller and denser vegetation such as roadside ditches and areas near creeks and wetlands. Although the owls are associated with Prairie Dogs in most of their North American range, Burrowing Owls in Saskatchewan rely mostly on other burrowing mammals such as ground squirrels and badgers.

Scientist are attempting to pinpoint wintering areas of this species by the use of radio tags. So far, owls have been discovered wintering in Texas and Mexico.

These birds leave their winter grounds in March and April and arrive on their breeding grounds as late as May. While our Burrowing Owls usually rely on abandoned mammal burrows for nesting, Burrowing Owls in Florida usually excavate their own burrows and can dig up to 1.5 m per day.

Egg-laying begins two weeks after their arrival in Saskatchewan and incubation lasts for approximately four weeks.

Once the young appear above ground, adults and young birds may move and use satellite burrows in addition to the nest burrow.

Clutches usually consist of 6-11 (average 9) round white eggs that are a little smaller than ping pong balls.

Young Burrowing Owls will often imitate the sound of a rattlesnake as a defense mechanism when intruders approach the burrow.

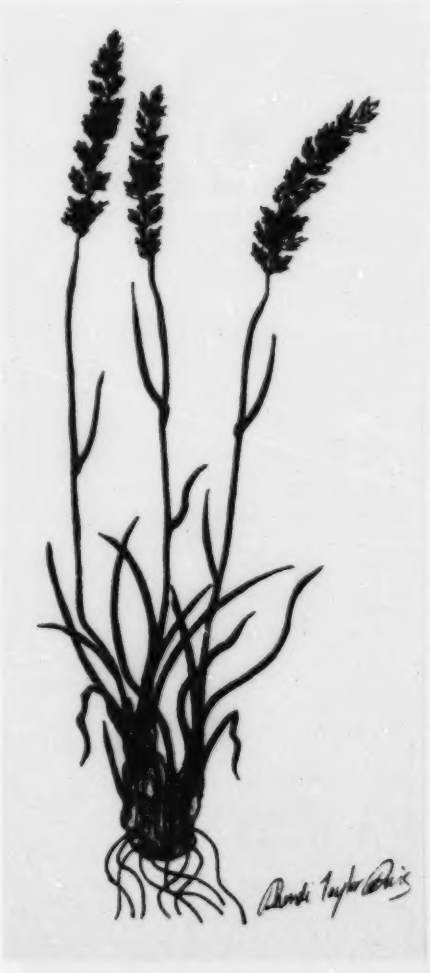
Although Burrowing Owls are active near their burrows in the daytime, they catch most of their food after dark. Their diet is mostly mice, voles, beetles and grasshoppers.

These owls may be seen throughout their range in southern Saskatchewan, particular on the Regina Plains, Moose Jaw Exhibition Centre, and in Grasslands National Park.

Operation Burrowing Owl (OBO) is a landowner stewardship program delivered by Nature Saskatchewan that encourages conservation of grassland habitat for Burrowing Owls and other prairie species. Since 1987, OBO has enrolled 625 landowners in their program conserving 25,000 ha of private land and 39,000 ha of public land. OBO encourages people who see Burrowing Owls to call (the Hoot-Line) 1-800-667-4668.

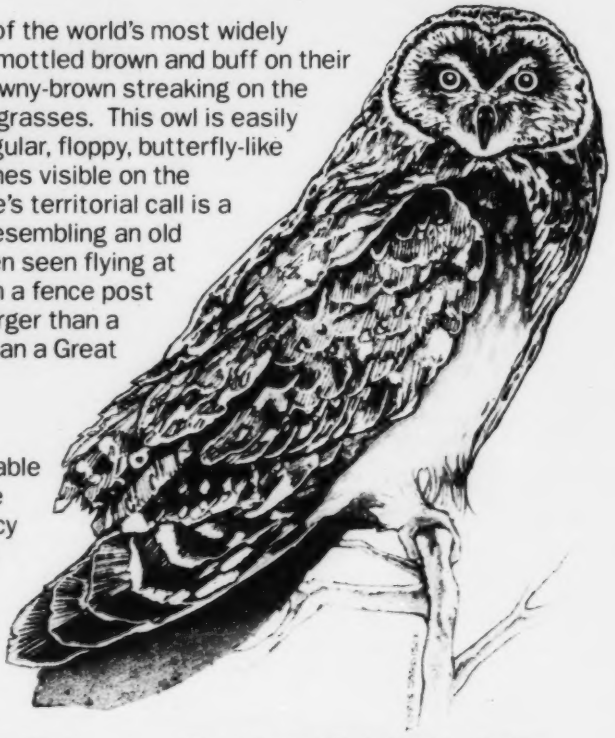
June Grass (*Koeleria gracilis*)

Common throughout the prairie grasslands, June Grass is usually found as single plants in mixed communities. Although it increases with overgrazing, it is regarded as a palatable forage, particularly in the spring when digestible contents are as high as other good prairie grasses.



Short-eared Owl (*Asio flammeus*)

The Short-eared Owl is one of the world's most widely distributed owls. Adults are mottled brown and buff on their backside and whitish with tawny-brown streaking on the underside, resembling dried grasses. This owl is easily identified in flight by its irregular, floppy, butterfly-like flight, and black "wrist" patches visible on the underside of wings. The male's territorial call is a pulsing *"voo-voo-voo-hoo"* resembling an old steam engine. They are often seen flying at dusk and dawn or perched on a fence post or on the ground. They are larger than a Burrowing Owl but smaller than a Great Horned Owl.



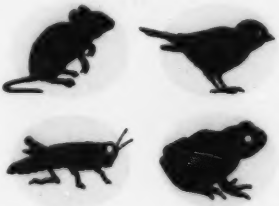
Populations appear to be stable but are difficult to determine because of the owl's tendency to concentrate in areas with abundant small mammal populations in a given year. For example, unusually large numbers of Short-eared Owls were recorded in Saskatchewan during vole outbreaks in 1960, 1969, and 1997.

The Short-eared Owl is an open country, ground-nesting species that inhabits marshes, grasslands, and tundra throughout much of North America, South America and Eurasia. Nests are usually located on dry sites with enough vegetation to conceal incubating females.

The summer range of this species can change from year to year depending on the available food supply. It withdraws in winter from the northern part of its range in Canada and has been seen wintering from the southern fringe of the Boreal Forest south to Mexico.

Short-eared Owls hunt both day and night, likely depending on the activity periods of their main prey, voles. They fly over open areas, typically one to three meters above the ground, and quickly alter their flight path to drop down on prey.

Typically, they swallow prey whole, although the heads of small mammals and wings of birds may be clipped off prior to eating. Pellets containing indigestible material (e.g. bones and fur or feathers) are coughed up 8 -10 hours after a meal.



The Short-eared Owl nests on the ground, unlike most other owls which nest in trees. Nests are usually situated in the shelter of a grass mound or under a tuft of grass.

Clutch sizes average from 4-10 eggs. The female begins incubating eggs immediately after laying with young hatching in the same order in which the eggs were laid. During food shortages, younger nestlings may not survive and may be scavenged by nest mates.

Young leave the nest 10-18 days after hatching.

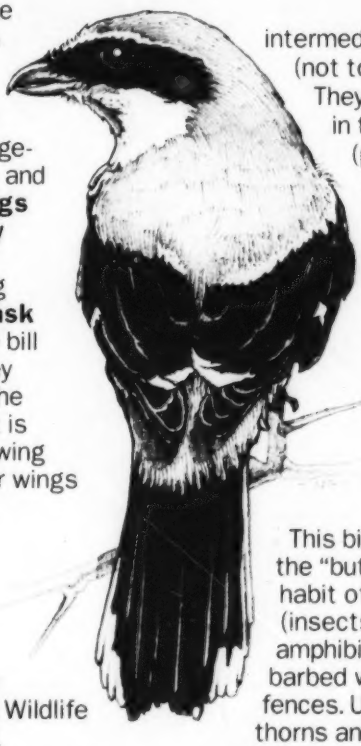
This owl has relatively small nesting territories and home ranges, varying from 12 to 178 ha and often nests in loose colonies.

Common Yarrow
(*Achillea millefolium*)

This plant is one of the most common white flowers of the summer in Saskatchewan. It is an aromatic perennial found almost everywhere in Canada and many horticultural varieties have been developed. It inhabits a wide variety of soil conditions from grasslands and pastures to shores, stream edges and saline flats. Yarrow has a variety of medicinal and herbal uses. Its concentration of camphors, oils and aromatics make it a popular treatment for fevers and colds.

Loggerhead Shrike (*Lanius ludovicianus*)

The Loggerhead Shrike is a songbird that has a **hooked bill** and hunts like a small hawk. A little smaller than a robin, these large-headed birds are gray and white with **black wings and tail bordered by white markings**. Another distinguishing feature is a **black mask** that extends from the bill through the eyes. They typically fly close to the ground and their flight is undulating with rapid wing bursts that make their wings difficult to see.



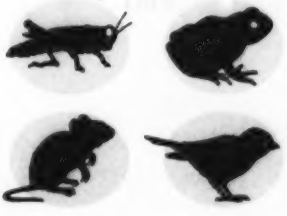
This species of shrike is listed as "threatened" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Populations appear to be stable in Saskatchewan over the past 20 years after experiencing significant declines in the 1970s. According to the Atlas of Saskatchewan Birds, the highest breeding densities in Saskatchewan occur south and west of Saskatoon to the U.S. border.

This shrike can be found wintering in the lower half of the U. S. and south into Mexico.

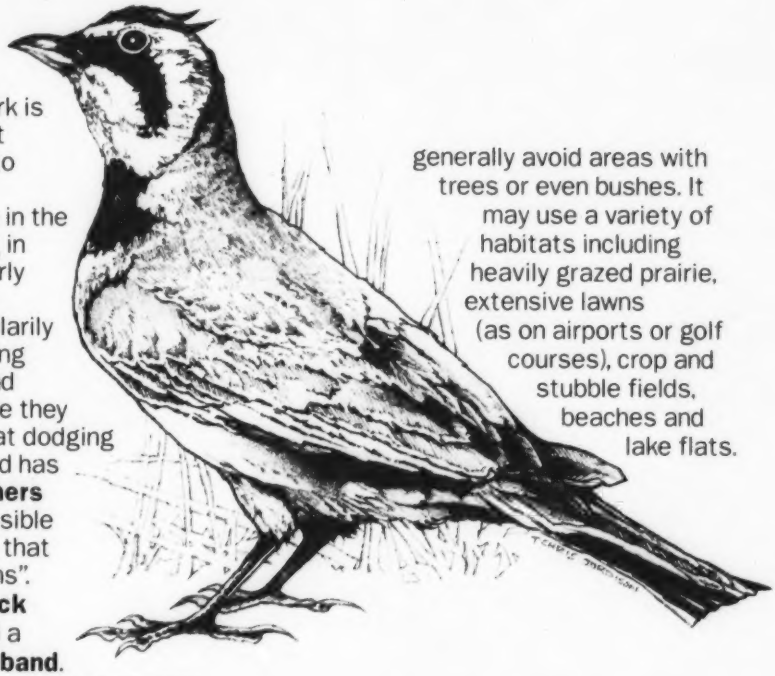
Loggerhead Shrikes usually prefer pastures and fields with intermediate amounts of cover (not too dense, not too sparse). They place their open-cup nest in trees, shelterbelts (particularly Caragana shelterbelts) and shrubs, preferably thorny species like Hawthorn or Buffaloberry. Loggerhead Shrikes are often seen perched on utility wires and fence lines.

This bird is often referred to as the "butcher bird" because of its habit of impaling its prey (insects, mammals, birds, and amphibians) on hawthorn and barbed wire fences. Using thorns and barbs to anchor their prey allows them to compensate for their weak songbird feet while they tear off bite-sized chunks.

During courtship, Loggerhead Shrikes occasionally break into a bubbly musical "song". Both females and males sing. Their alarm call is a high pitched shrieking - hence their name shrike.



Horned Lark (*Eremophila alpestris*)



The Horned Lark is one of the first migrant birds to return to Saskatchewan in the spring, arriving in February or early March. Horned Larks can regularily be seen foraging along roads and highways where they appear adept at dodging traffic. This bird has **tufts of feathers on its head** visible at close range that resemble "horns". It also has **black sideburns** and a **black breast band**. The Horned Lark is slightly larger than a sparrow, is generally brown in colour and has a black tail with white outer feathers. Its song resembles the rapid rising tone of a coin bouncing on a countertop.

Horned Lark populations have been slowly declining since the mid-1960's. These declines are especially apparent in eastern North America. In Saskatchewan Horned Lark populations are declining at about 4 percent per year.

In Saskatchewan, Horned Larks inhabit areas with bare ground and short sparse vegetation and generally avoid areas with trees or even bushes. It may use a variety of habitats including heavily grazed prairie, extensive lawns (as on airports or golf courses), crop and stubble fields, beaches and lake flats.

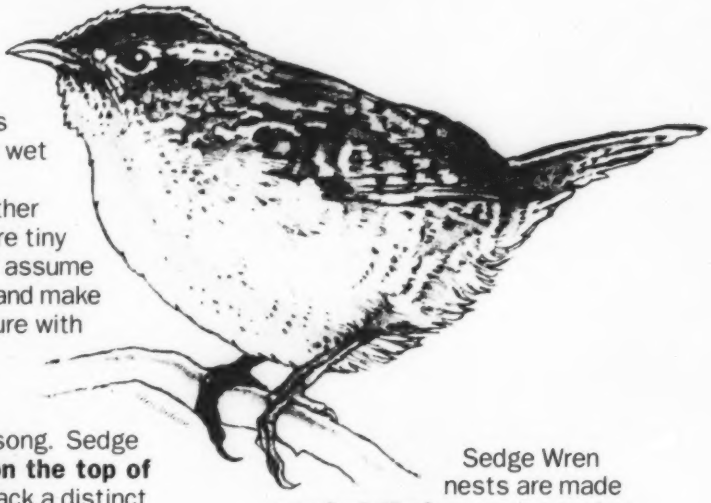
The Horned Larks range includes parts of Europe and Asia in addition to North America.

While defending its nesting territory, the male Horned Lark often flies up steeply in silence to several hundred feet above ground, then hovers and circles for several minutes while singing, before diving steeply back to the ground.

Their nest site is on open ground, often next to grass clumps or other objects, which provide protection from the wind.

Winters as far south as the Gulf Coast.

Sedge Wren (*Cistothorus platensis*)



Sedge Wrens are one of two North American wren species that select wetland or wet meadow habitat for breeding. Similar to other wrens, Sedge Wrens are tiny brown birds that often assume a "**tails up**" **posture**, and make up for their small stature with a feisty attitude. Sedge Wrens differ from Marsh Wrens in their appearance and song. Sedge Wrens are **streaked on the top of the head and back**, lack a distinct white stripe over the eye, and sing a short succession of notes.

Sedge Wren populations are not well monitored by existing bird surveys, but the information available suggests populations are stable or increasing in many regions. Sedge Wrens are highly mobile in their search for suitable wetland conditions, and their numbers increase in years of adequate precipitation and decrease in years of drought or flooding.

As their name suggests, Sedge Wrens prefer moist grass, sedge marshes, wet meadows, and wetland margins, and avoid the cattail marshes occupied by Marsh Wrens.

Its winter range extends from the southeastern portion of the U.S. to central Mexico and south through Central and South America.

Sedge Wren nests are made up of a ball of woven grass that is interwoven with surrounding grass stalks. The entrance to the interior of the nest is usually well hidden and difficult to find. Male Sedge Wrens often build several other nests which are thought to serve as courtship sites and decoys to confuse predators.

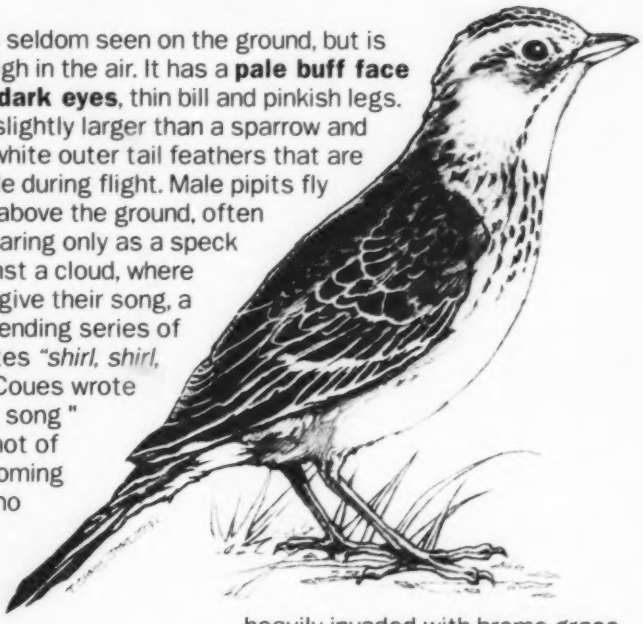
Four to eight white eggs are laid per nest.

Like other wrens, Sedge Wrens are known to peck the eggs of other birds that nest close to their nest. This behaviour may decrease the number of competitors for limited food resources in the area surrounding the wren nest.

They do not always mate as pairs; some males will mate with more than one female, whereas other males are unsuccessful in attracting any females.

During the breeding season Sedge Wrens can often be heard singing at night.

Sprague's Pipit (*Anthus spragueii*)



The Sprague's Pipit is seldom seen on the ground, but is often heard singing high in the air. It has a **pale buff face** with **dark eyes**, thin bill and pinkish legs. It is slightly larger than a sparrow and has white outer tail feathers that are visible during flight. Male pipits fly high above the ground, often appearing only as a speck against a cloud, where they give their song, a descending series of thin, wispy, double notes *"shirl, shirl, shirl"*. In 1874 Elliott Coues wrote of the Sprague's Pipit song " ...there is something not of earth in the melody, coming from above, yet from no visible source. The notes are simply indescribable; but once heard they can never be forgotten".

This species is listed as threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). This designation means that this bird is likely to become endangered if the factors leading up to this are not reversed. Pipit populations are declining by nearly six percent per year, likely due to loss and degradation of native prairie.

Sprague's Pipits prefer large tracts of native prairie, which typically are lightly or moderately grazed and have residual cover from the previous year's growing season. They make little use of tame pasture or grassland that has been heavily invaded with brome grass. They tolerate pastures with some woody vegetation but avoid pastures with high densities of shrubs or trees.

Sprague's Pipit populations reach their highest densities in the large native pastures of southwestern Saskatchewan and southeastern Alberta.

The female covers the top of the nest by building a dome made of woven grasses.

This species was named for Isaac Sprague who shot the first specimen near the upper Missouri River in 1843.

Winters from southern Arizona, Texas, southern Louisiana, and northwestern Mississippi to southwestern Mexico.

Clay-colored Sparrow (*Spizella pallida*)

The Clay-colored Sparrow is a common and widespread bird of the grassland and parkland region of Saskatchewan. It is a small sparrow with a notched tail, wing bars and **unstreaked breast**. A good field mark to look for is a conspicuous **broad pale gray stripe** around the back of its neck and **dark whisker stripes** that extend from the base of the bill along the throat. Another good way to identify this bird is by its song, a series of low, flat, insect-like buzzes.

Populations are declining slowly throughout its range.

Common in shrubby pastures, alfalfa fields, forest edges and roadside habitat with shrubs. Prefers native pastures over tame pastures, likely due to the lack of shrubs in the latter habitat. Alfalfa, however, may act as a substitute for shrubs in hayfields and weedy fields. Nests typically are built at the base of or in the branches of common shrubs such as Western Snowberry.

Male Clay-colored Sparrows advertise their territory by singing from perches fairly close to the ground.

Nest building starts soon after pair formation about the 20th of May.

The nest is built by the female from material (grass and forb stems) gathered near the nest site.

Nests, placed under or in shrubs or alfalfa, are typically located higher above the ground as the season progresses and vegetation grows.

Typically four eggs are laid which are incubated for 10-12 days. Eggs are a brilliant baby blue with brown splotching. The male often brings food to the female on the nest.

The young leave the nest 7-9 days after hatching.

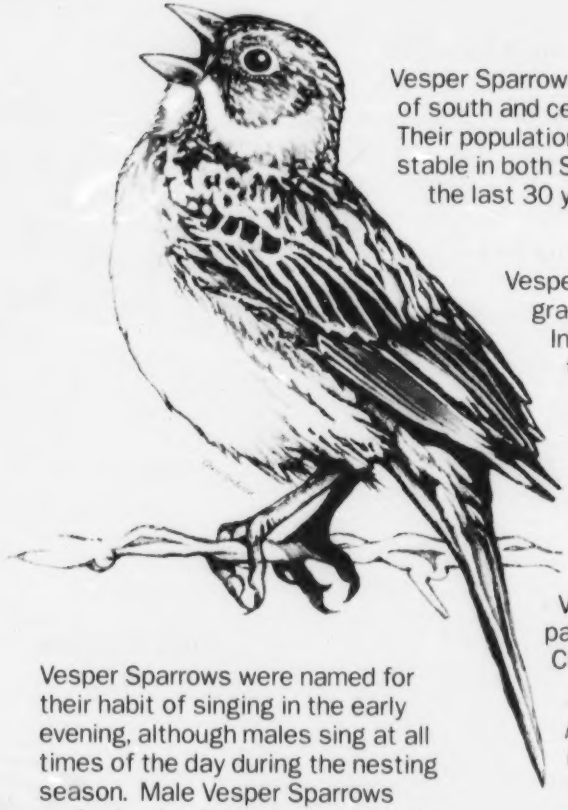
The first Clay-colored Sparrow was collected at Carlton House, Saskatchewan by English explorers in 1827.

This sparrow leaves its wintering grounds in late-March and arrives in Saskatchewan in early May.

It often migrates in flocks of 25-100 but has been seen in flocks of 500-1000.

Winters in southern Texas and Mexico.

Vesper Sparrow (*Pooecetes gramineus*)



Vesper Sparrows are common throughout much of south and central Saskatchewan. Their populations have remained relatively stable in both Saskatchewan and Canada over the last 30 years.

Vesper Sparrows breed in open grassland near trees and shrubs. In Saskatchewan, they occur more frequently in seeded forage crops, such as tame hay and pasture, than native pasture. They are found in transition zones between habitats and will use fence lines and ditches.

Vesper Sparrow nests are often parasitized by Brown-headed Cowbirds in Saskatchewan.

They arrive in Saskatchewan in April and early May and immediately begin to establish territories.

Female Vesper Sparrows lay 3-5 eggs that are incubated 11-13 days.

In haylands, Vesper Sparrows often re-nest in late July after the hay has been cut and baled.

A Vesper Sparrow banded on June 14, 1929, south of Lipton, Saskatchewan, was recaptured at the same location on May, 1931.

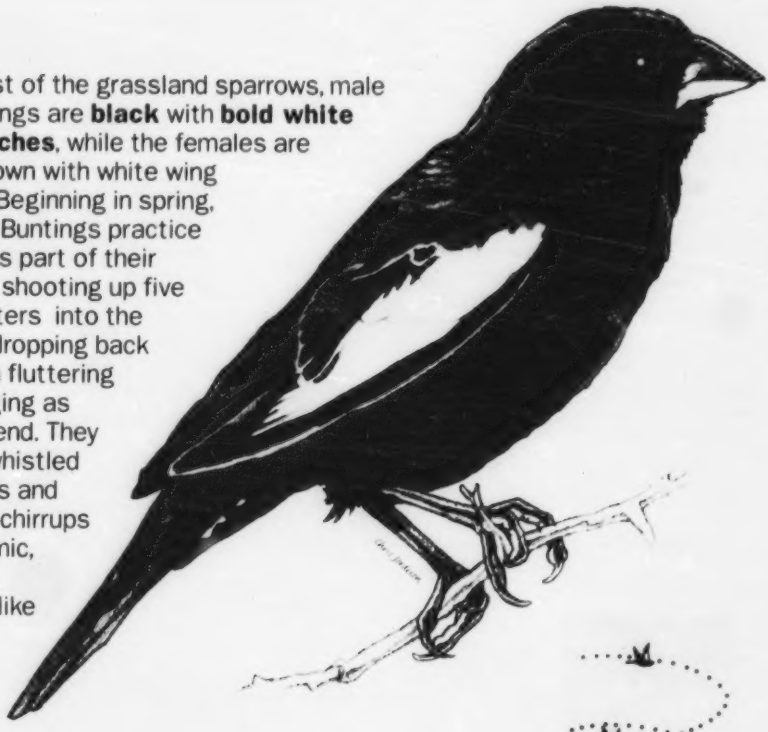
Winters in the southern United States and along the Gulf Coast.

Vesper Sparrows were named for their habit of singing in the early evening, although males sing at all times of the day during the nesting season. Male Vesper Sparrows prefer to sing from elevated perches such as fence posts, hay bales and shrubs. Their song is melodic and begins with two long slurred notes followed by two higher notes, and ends with a series of trills.

The most distinctive field marks of this relatively large, brown-streaked sparrow are the white outer tail feathers (that are conspicuous in flight), a **narrow white eye ring**, and a **chestnut-coloured shoulder patch**.

Lark Bunting (*Calamospiza melanocorys*)

The largest of the grassland sparrows, male Lark Buntings are **black** with **bold white wing patches**, while the females are mostly brown with white wing patches. Beginning in spring, male Lark Buntings practice "larking" as part of their courtship, shooting up five to ten meters into the sky, then dropping back to earth in fluttering flight, singing as they descend. They combine whistled notes, trills and toots and chirrups into rhythmic, complex, computer-like songs.



Larking

Although the Lark Bunting appears to be declining on the Canadian prairies, the breeding range of this bird varies markedly from year to year depending on moisture conditions. This makes interpretation of trends difficult as a decline in one part of its range may be offset by increases in other areas.

This species winters from southern California, central Arizona and north-central Texas to central Mexico.

This species is also nomadic in winter.

Lark Buntings are common in native grasslands with some shrub cover and hayfields with alfalfa. Their nests are located on the ground often near shrubs in pastures and clumps of alfalfa in hayfields. They typically avoid areas with much bare ground, and where vegetation has been overgrazed or idled.

These buntings leave their wintering grounds in early March, arrive on their breeding in April and May and begin nesting in May and June.

Females scrape a depression in the ground and line the depression with grasses and forb stems, which the male helps gather.

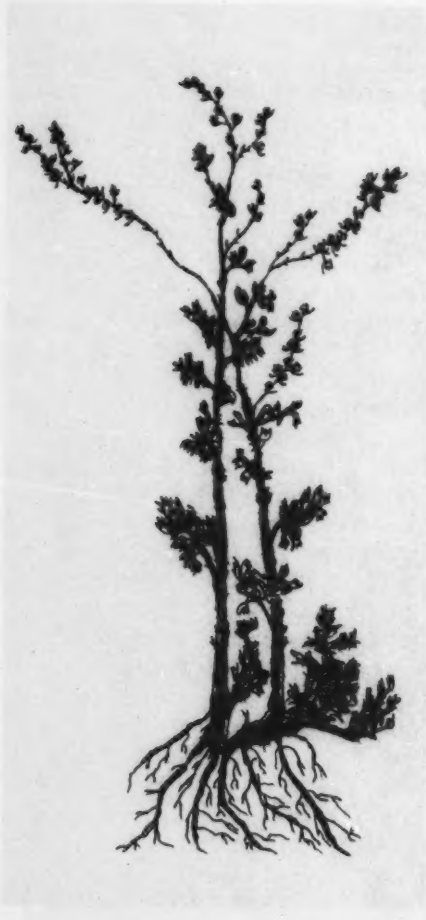
Males sing two kinds of flight songs, a primary song given from a perch or flight, and a communal song typically performed with other males.

Usually four to five pale, unmarked blue eggs are laid.

Males and females perform mating displays, which involve the male pointing his bill and tail upward and his wings to the side for several seconds. This may occur 8-10 times per hour.

Large numbers of Lark Buntings have been reported drowned in stock tanks containing mats of algae.

Fifty-four percent of Lark Bunting nests at Val Marie, SK were parasitized by Brown-headed Cowbirds. This frequency of parasitizism is higher than elsewhere in their breeding range.



Pasture Sage (*Artemisia frigida*)

Pasture Sage is common throughout Saskatchewan in dry grasslands, open slopes and disturbed sites. Where it is abundant, it is often an indicator of overgrazing. Blackfoot Indian Tribes burned the aromatic branches of Pasture Sage so that the smoke would repel biting insects. Branches were also placed under bedding to deter bedbugs, fleas, and lice. It is still used today by aboriginal peoples as a smudge for spiritual cleansing.

Grasshopper Sparrow (*Ammodramus savannarum*)

Grasshopper Sparrows are gray-brown above with buffy-coloured sides and breast, and a short tail. The head appears flat and the **crown is dark** with a **pale central strip**. A **yellow-orange spot** can often be seen between the eye and bill. They can be easily confused with Baird's and Savannah Sparrows, but Grasshopper Sparrows lack streaks on the breast and sides. The Grasshopper Sparrow has been called "the yellow-winged sparrow" because of the yellow feathers found at the bend in the wings. They are named for their relatively quiet song that consists of one or two high introductory notes followed by a brief grasshopper-like buzz.

Grasshopper Sparrow populations appear to be declining in Saskatchewan and throughout their range although their numbers seem to fluctuate on an annual basis. The species is relatively uncommon in most of the province, but may be locally abundant in areas such as the Great Sandhills north of Tompkins, and Gull Lake, SK.

Grasshopper Sparrows are found mostly in patchy native and tame grasslands, and hayfields with bunch grasses at least 10 cm tall. They are particularly common in crested wheatgrass pastures that provide the right combination of bare ground and clumped grasses. These sparrows are highly territorial and can often be seen singing from tall forbs or shrubs.

This is one of the few sparrows that sings two completely different songs. The primary song (described above) is typically delivered from a perch, and the sustained song may be given from a perch or in flight and is described as a more musical series of see-sawing, squeaky notes. The primary song is believed to be territorial while the sustained song is mostly used for mate attraction.

Winters in southern United States and into Mexico.

Both males and females sing, but the female usually sings only the trill part. The male often sings at night.

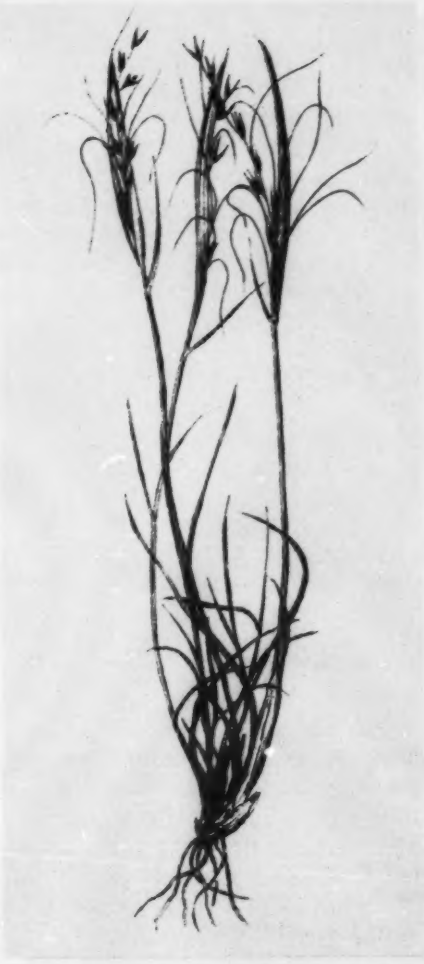
Except when singing, Grasshopper Sparrows tend to be very secretive and spend most of their time skulking through grassy cover.

The breeding season runs from May to August. Four to five cream-white, speckled, brown-spotted eggs are laid. In Saskatchewan Grasshopper Sparrows typically arrive later than the other sparrows.

Incubation is carried out by the female and lasts 11-12 days.

Their nests are a slight depression in the ground, usually at the base of grass clumps or alfalfa, often with a partial dome of clover or grasses.

In some areas of its range the species requires parcels of grassland larger than 10 ha.



Needle-and-thread
(*Stipa comata*)

This very nutritious forage plant dominates the drier prairie regions of Saskatchewan. Each seed has an exceptionally long, soft, curled beard which looks like a threaded sewing needle. Needle-and-thread is one of the most palatable native grasses; it grows in early spring, withstands grazing, has an extended growing season and excellent curing properties.

Savannah Sparrow (*Passerculus sandwichensis*)

The best field mark that identifies the Savannah Sparrow is a **yellow eyebrow stripe** that is limited to the area just above and in front of the eye. This is particularly pronounced in the spring and early summer, but fades in the late summer. Other field marks to look for are **bright pink legs and feet**, and a streaked breast that sometimes forms a central breast spot. The Savannah Sparrow song consists of 2-3 introductory chips followed by two buzzy trills *"tsip-tsip"*.

Unlike many grassland birds, Savannah Sparrow populations seem to be stable across Saskatchewan and most areas of Canada.

Savannah Sparrows occupy a variety of grassy habitats in Saskatchewan. They are common in hayland, weedy fields, pastures and ditches with relatively tall, dense vegetation. They typically avoid areas with extensive woody cover, but will nest in or near clumps of sparse western snowberry shrubs.

The bird was named after the city of Savannah, Georgia where it was first discovered.

The Savannah Sparrow song is occasionally used as background noise on television commercials.

Winters in southern U.S., Mexico and Guatemala.

Despite their long migration route, Savannah Sparrows will often return to the same area each year, and often occupy the same territory.

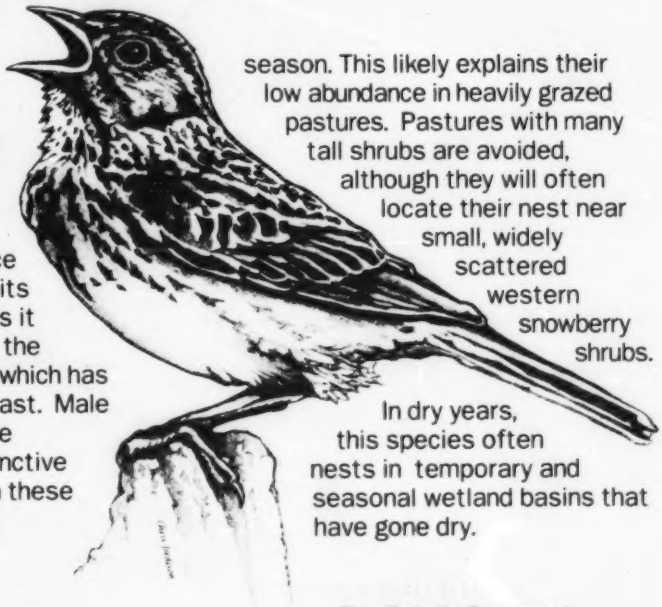
These sparrows generally migrate at night, in flocks of 10-100 birds, flying several hundred km before resting.

Because Savannah Sparrows are attracted to hayfields, they risk losing their nests to the haying operations and predators when fields are mowed before mid July.

Incubation takes from 12-13 days and young leave the nest 8-10 days after hatching.

Of the 26,623 Savannah Sparrows banded in Canada only 0.3 percent have been recovered.

Baird's Sparrow (*Ammodramus bairdii*)



This flat-headed sparrow may be told apart from most sparrows by the **ochre colouring** on its head combined with **black ear spots** behind the eye. The band/necklace of delicate streaks on its upper breast separates it from its close relative, the Grasshopper Sparrow, which has no streaking on its breast. Male Baird's Sparrows can be identified by their distinctive trilling songs, although these may vary considerably among individuals.

This sparrow was listed as threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). In 1996, it was de-listed as populations were discovered to be larger than first thought. As with the Lark Bunting, the abundance of this bird varies from year to year depending on moisture conditions. Currently, Canadian populations appear stable while populations in the U. S. are declining by three percent annually.

Baird's Sparrows are found in native and tame pastures and hay land, but appear to nest most successfully in native pastures. They typically nest in pastures (at least 12 ha in size) in good to excellent range condition with some dead vegetation remaining from the previous growing season. This likely explains their low abundance in heavily grazed pastures. Pastures with many tall shrubs are avoided, although they will often locate their nest near small, widely scattered western snowberry shrubs.

In dry years, this species often nests in temporary and seasonal wetland basins that have gone dry.

The Baird's Sparrow is considered one of the highest conservation priority species on the prairies.

At least 12 different song types have been described for this species, with each male singing only one song type during his lifetime.

These birds leave their wintering grounds in late February and early March and arrive on their breeding grounds in late April and early May.

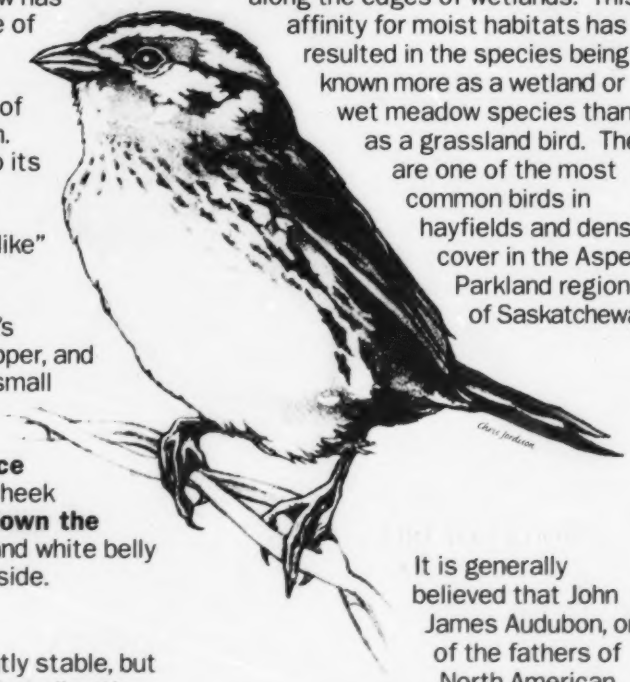
Nesting begins in late May and continues until mid-August, with a peak in June and July.

Three to five eggs are laid which are buff-coloured and have reddish speckles and blotches.

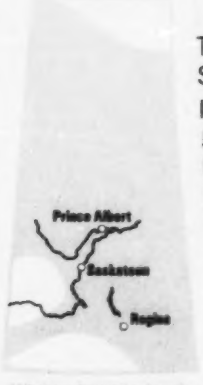
Winters from southern Arizona and New Mexico south to northern Mexico.

Le Conte's Sparrow (*Ammodramus leconteii*)

The Le Conte's Sparrow has been described as one of the most attractive sparrows in North America, but also one of the most poorly known. This is probably due to its secretive and elusive nature that has been described as "mouse-like" by some observers. Although similar in appearance to Nelson's Sharp-tailed, Grasshopper, and Baird's Sparrows this small sparrow may be identified by its **yellowish-orange face and eyeline**, grayish cheek patch, **white stripe down the middle of its head**, and white belly with streaks down its side.



Populations are currently stable, but researchers suspect that climatic variability may be a major factor leading to dramatic fluctuations in their abundance and distribution. Le Conte's Sparrow reach peak numbers during wet years, while during dry years they may be scarce or absent.



Winters in central and southern U.S.

The Le Conte's Sparrow generally prefers moist grassland and wet meadow habitats. It tends to avoid areas with woody vegetation or permanent standing water, although they often are found along the edges of wetlands. This affinity for moist habitats has resulted in the species being known more as a wetland or wet meadow species than as a grassland bird. They are one of the most common birds in hayfields and dense cover in the Aspen Parkland region of Saskatchewan.

It is generally believed that John James Audubon, one of the fathers of North American ornithology (the study of birds), named this sparrow after Dr. John Le Conte, a physician in Georgia and later president of the University of California at Berkeley.

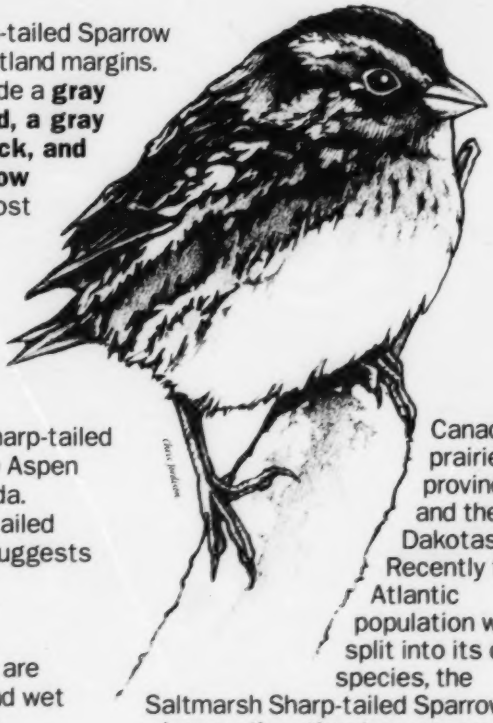
Only the male Le Conte's Sparrow sings, often from a concealed location within dense vegetation.

Ernest Thompson Seton, a renowned naturalist and artist described its song as "So thin a sound, and so creaky, that I believe it is usually attributed to a grasshopper".

Their nests are well concealed, cup-shaped and placed on or near the ground in a clump of grass.

Nelson's Sharp-tailed Sparrow (*Ammodramus nelsoni*)

Rarely seen, the Nelson's Sharp-tailed Sparrow skulks in the tall grasses of wetland margins. Distinguishing field marks include a **gray stripe on the top of the head, a gray patch on the back of the neck, and buffy orange-coloured eyebrow and breast**. This sparrow is most easily detected by its song, a soft trill resembling the sizzling sound of water being added to bacon frying in the pan.



The majority of the Nelson's Sharp-tailed Sparrow summer range is in the Aspen Parkland region of prairie Canada. Information on Nelson's Sharp-tailed Sparrow status is scarce, but suggests populations are stable.

Nelson's Sharp-tailed Sparrows are found in freshwater marshes and wet meadows with tall, dense grass. Wetland drainage is sure to reduce the amount of habitat available for this species. However, individuals are opportunistic and will establish territories in recently flooded areas provided suitable vegetation is present. Birds push their way through the vegetation as they walk along the ground looking for food.

Historically, Sharp-tailed Sparrows were thought to occur in several distinct groups; one population along the northeast Atlantic Coast, another along the southern shore of Hudson Bay, and a third population that ranges across the three Canadian prairie provinces and the Dakotas. Recently the Atlantic population was split into its own species, the Saltmarsh Sharp-tailed Sparrow, whereas the other two groups became known as Nelson's Sharp-tailed Sparrow.

Unlike many other sparrows, male Nelson's Sharp-tailed Sparrows may not defend territories, but simply compete with other males to mate with females passing close by their singing perches.

Nests are built in clumps of dead grass left from the previous summer, and are located several cm above the mud or water.

Winters from the Gulf of Mexico from Texas to Florida and also along the Atlantic coast from New York to southern Florida.

McCown's Longspur (*Calcarius mccownii*)

During the summer males have a gray face with black crown and moustache, gray nape, white throat, and **black crescent on the breast**. The **chestnut-coloured wing patches** and **white tail with an inverted black T** are especially noticeable in flight. Females are more drab and pale overall, with some chestnut colouring on the wings. The male displays by flying up above his territory, then floating down on outstretched wings while singing his delicate, tinkling territorial song.

Populations have declined since the early 1900s due to the loss of breeding and wintering habitat through fire exclusion and conversion of native prairie to cropland. Current population trends are uncertain as this species is poorly sampled by existing surveys.

McCown's Longspurs are one of the few rivals to Horned Larks in their preference for short grass and bare ground. These longspurs prefer very open, grazed grasslands, short grass prairie and summer fallow fields. Shrubby cover is avoided. Individuals often use sparsely vegetated hilltops for displaying and nesting. Early in the breeding season, nests are often placed on south facing slopes. Winter habitat is similar to that of summer, with the addition of freshly plowed and bare fields.

This bird leaves its wintering grounds in late February or early March and arrives on the Saskatchewan breeding grounds in April and May.

Nesting begins by mid-May.

The nest consists of a simple grass structure, placed next to a grass tuft in an area of very sparse plant cover.

Winters from Arizona, Colorado, and Kansas south to Texas and northwestern Mexico.

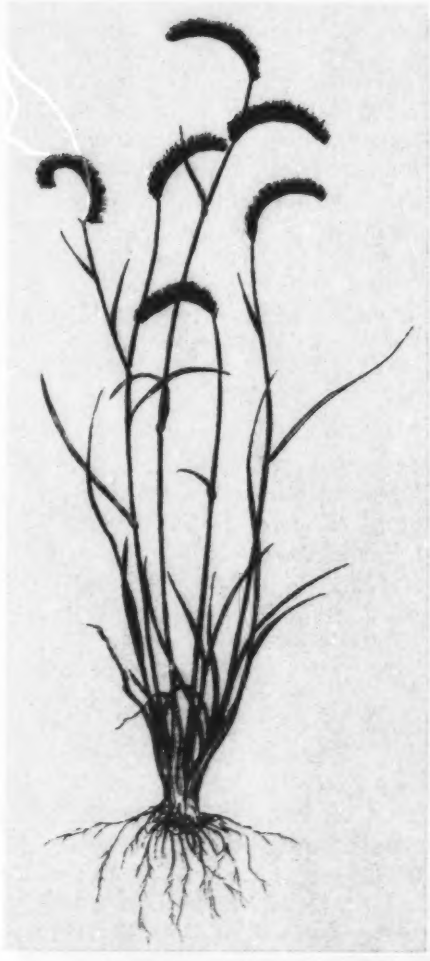
Nests near shrubs are more likely to be depredated by ground squirrels, who use the shrub as cover to hide from foraging hawks.

Three to four, buff-coloured eggs with faint brown blotches are laid.

Most young are out of the nest by mid-July.

Paired birds are strongly attached to each other and stay close together, even walking side by side when foraging.

Their nests are difficult for predators (and humans) to find because the female sits tightly in her nest until practically stepped upon, relying on her superb camouflage to avoid detection. Biologists often have to remove the bird from the nest by hand to count their eggs.

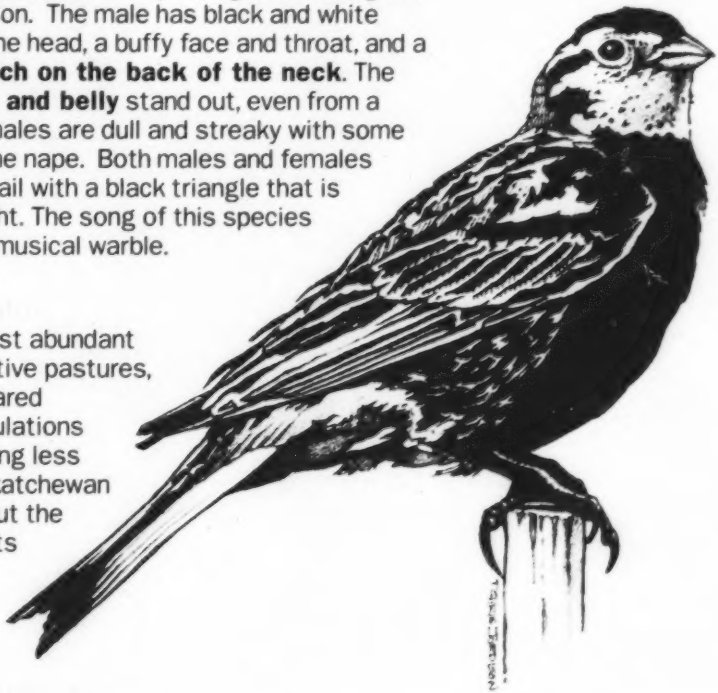


Blue Grama (*Bouteloua gracilis*)

Blue Grama is adapted to drier prairie sites, actually increasing in abundance in dry years or under prolonged heavy grazing pressure. It forms dense mats of short curly leaves and a characteristic "eyebrow" looking seed head. Aboriginal peoples used the Blue Grama to forecast the upcoming winter weather. If stalks produced only one seed spike, the winter would be mild, if there were two or more spikes, the winter would be severe.

Chestnut-collared Longspur (*Calcarius ornatus*)

Males and females are easily recognized during the breeding season. The male has black and white markings on the head, a buffy face and throat, and a **chestnut patch on the back of the neck**. The **black breast and belly** stand out, even from a distance. Females are dull and streaky with some chestnut on the nape. Both males and females have a white tail with a black triangle that is obvious in flight. The song of this species consists of a musical warble.



One of the most abundant species on native pastures, Chestnut-collared Longspur populations may be declining less rapidly in Saskatchewan than throughout the remainder of its range.

Chestnut-collared Longspurs are most abundant on grazed native prairie larger than 12 ha with few or no shrubs. Although they typically occupy areas that have shorter, sparser vegetation than other grassland birds, they build their nests in areas with available cover. They will nest in hayfields early in the season, but typically abandon these areas once the vegetation becomes too tall and dense.

Winters from Colorado and Kansas, south to Arizona, Texas and Mexico.

This longspur is named for the chestnut collar on its nape and its elongated hind claw (spur). This spur may aid in walking on the ground, although its purpose has yet to be demonstrated.

The Chestnut-collared Longspur is one of the first grassland songbirds to arrive in the province in the spring. Egg laying occurs from early May to mid-July.

Males defend their territory by performing aerial song displays.

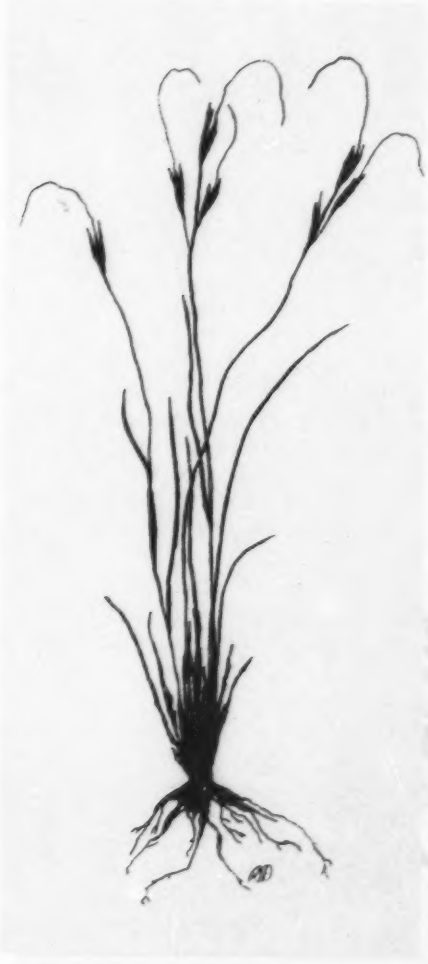
They will typically fly a short distance up from the ground or perch, spread their wings and tail, and sing while they descend towards the ground.

Their nests are less concealed than many other grassland birds and are often located next to cowpies. Although it is not known why, cowpies may provide some protection from the sun and wind, or they may offer protection from predators that rely on scent to find food.

Longspurs are infrequently parasitized by Brown-headed Cowbirds, even though they cannot recognize cowbird eggs as being different from their own.

Females lay 3-5 (mostly 4) eggs and incubate them for 11-12 days. Both parents feed the young, and males often care for the young once they leave the nest (8-10 days after hatching) while the female nests again.

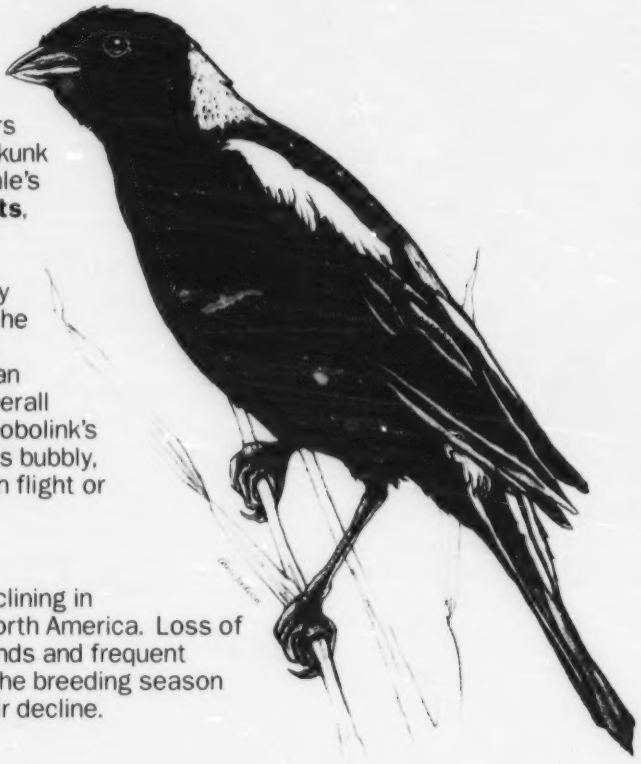
After the end of the nesting season these birds forage in large flocks. Most birds migrate south by September.



Western Porcupine Grass (*Stipa curtiseta*)

This clump grass is most recognizable by the long awns resembling porcupine quills, which extend from the seeds. It is closely related to needle-and-thread grass, but occurs on better soils and under higher moisture conditions such as those found in the fescue prairie and eastern prairie regions. The seeds of this plant are readily used for food by various species of grassland birds including the Chestnut-collared Longspur.

Bobolink (*Dolichonyx oryzivorus*)



The Bobolink is one of the most striking songbirds of the grasslands. Early settlers referred to the bird as the "skunk blackbird" because of the male's **black crown and underparts**, and **white scapulars**, lower back and upper tail coverts. The **buff-yellow nape** clearly distinguishes this bird from the smaller black-and-white Lark Bunting. Females resemble an oversized sparrow with an overall rich, buff-yellow colour. The Bobolink's song is easily identified by its bubbly, computer-like sounds given in flight or from an exposed perch.

Populations appear to be declining in Saskatchewan and across North America. Loss of habitat on the breeding grounds and frequent mowing of hay fields during the breeding season are the main reasons for their decline.

Nesting habitat includes weedy fields, wet meadows, and hay fields with tall grasses and forbs. Bobolinks mostly prefer fields with plenty of dead vegetation from previous growing seasons. Nests are typically located at the base of large forbs.

Bobolinks have one of the longest migrations for New World songbirds, a 20,000 km round trip.

Males usually sing two song types, each composed of 25-50 notes.

Winters east of the Andes in the grasslands of southwestern Brazil, Paraguay and Argentina.

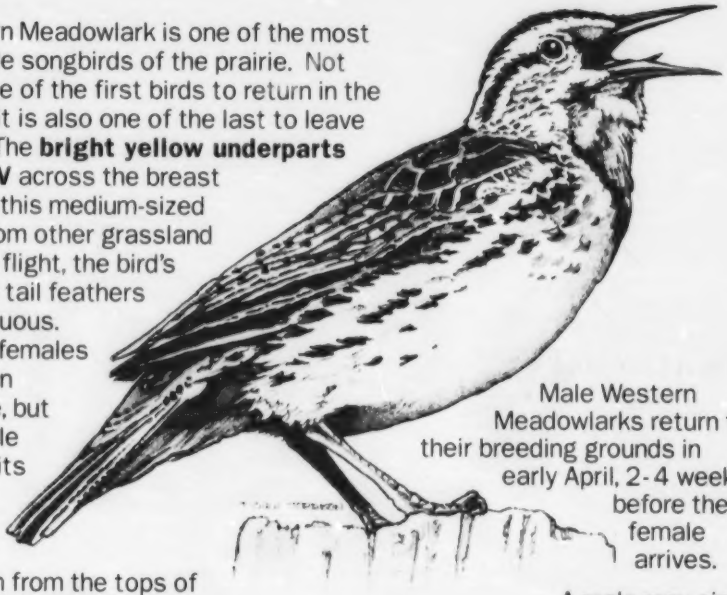
Female Bobolinks are able to assess the quality of their potential mates by the duration of their displays. Studies have found that males in better body condition are able to display for longer periods and tend to raise more young than males that display for shorter periods.

Male Bobolinks are polygamous – they will mate with more than one female. Second mates may be chosen three to eight days after pairing with the first female.

The male typically helps only the first mate with brooding duties, but will help both mates with the feeding of the young.

Western Meadowlark (*Sturnella neglecta*)

The Western Meadowlark is one of the most recognizable songbirds of the prairie. Not only is it one of the first birds to return in the spring, but it is also one of the last to leave in the fall. The **bright yellow underparts** and **black V** across the breast distinguish this medium-sized songbird from other grassland species. In flight, the bird's white outer tail feathers are conspicuous. Males and females are similar in appearance, but only the male advertises its presence with melodic songs given from the tops of fence posts and other suitable perch sites, or in flight.



Male Western Meadowlarks return to their breeding grounds in early April, 2-4 weeks before the female arrives.

A male may sing as many as 48 song types while attempting to attract a mate and defend its territory.

Although the Western Meadowlark appears to be one of the more common birds in southern Saskatchewan, its numbers are declining moderately (two percent per year) in western Canada, particularly in Manitoba and Saskatchewan. Loss and degradation of grassland habitat are believed to be responsible for the declines. Meadowlarks are attracted to hayfields and roadside areas, which may be destroyed if mowed during the nesting season.

Meadowlarks prefer open grassland, hay land and range land. Fields with extensive amounts of shrubs and trees that are heavily grazed are avoided.

Western Meadowlarks place their nests in fairly dense vegetation and often weave a dome of grasses over the nest making it difficult to find.

Meadowlarks are extremely sensitive to disturbance at the nest. Females flushed from their nest during egg laying or early incubation often desert the nest.

Three to seven white eggs with reddish splotches are laid and incubated by the female for 13-15 days.

Males are polygamous, often having two mates at the same time.

Winters primarily in south-western U.S. and Mexico.

Brown-headed Cowbird (*Molothrus ater*)

Although Brown-headed Cowbirds were once called "Buffalo Birds" due to their habit of following herds of bison, their name now reflects their more recent association with grazing livestock. Male cowbirds have a **brown head** and a **black body** with glossy feathers, whereas female cowbirds are plain brown. Cowbirds are the only bird species in Canada in which females never build nests, but rather lay their eggs in the nests of other birds (the hosts) which then incubate and feed the young cowbirds. This behaviour by the cowbird is known as brood parasitism. The male song begins with two low notes followed by a gurgling *"glug-glug-gleee"*, while females give a harsh chatter call.

Historically, cowbirds were restricted to the grasslands of central North America. However, expansion of agriculture, forestry, and road networks, has enabled cowbirds to expand their range to include much of North America. Currently, cowbirds are very abundant throughout much of Saskatchewan, although their distribution in the northern forests is largely restricted to habitats altered by humans.

Typical cowbird habitat includes some short grass for foraging, but cowbirds will parasitize other bird's nests in habitats including forest edges, brushy thickets, prairie fields, marshes, and especially along edges of small wetlands and pastures and residential areas. Bird feeders supplied with food during the summer may enable cowbirds to breed in areas where foraging would otherwise not be possible.

Winters south to southern Mexico.

Cowbirds feed mainly on seeds and insects and usually forage on the ground, often alongside large grazing mammals which disturb insect prey. Grasshoppers and beetles are some of their favorites.

The North American population of Brown-headed Cowbirds is estimated to be 20 - 40 million birds.

Cowbirds have parasitized nests of over 220 species of birds, (including such unlikely hosts as hawks and ducks) with more than 140 species actually recorded as rearing young cowbirds. In grassland habitats of the prairies, the Brewer's Blackbird is a favorite host for cowbirds, along with Western Meadowlarks, Lark Buntings, Baird's Sparrows, and Savannah Sparrows.

Some birds such as American Robins, Baltimore Orioles and Eastern Kingbirds recognize cowbird eggs as different from their own and remove them from their nests. These nests tend to be avoided by the cowbird.

Female cowbirds search for nests by perching quietly in the tops of shrubs or trees and watching for nest-building activity by other birds. They will fly in and around the vegetation landing now and then in leaves and undergrowth to flush birds from their nests. They will also walk quietly on the ground watching for movements of other birds.

Northern Wheatgrass
(*Agropyron dasystachyum*)

This is the most common wheatgrass of the prairies. It is associated with western wheatgrass on clay and loam soils. For easy identification, look for layers of dead plant material around the stem base. The plant is palatable and nutritious despite its fairly coarse stem and harsh leaves.

Silver Buffaloberry
(*Shepherdia argentea*)

The Silver Buffaloberry is a tall, thickly branched perennial shrub with rough spines distributed along its silvery branches. Its leaves are long and narrow with dense silver scales on both sides. Bright red berries with a very sour taste are produced in summer. This shrub is common in Saskatchewan and is found around sloughs and coulees. It retains its leaves well into winter, providing forage for wildlife. The Loggerhead Shrike uses the spines of this plant to impale its prey.

Your work may result in the protection of a priceless ecosystem. Future generations will be grateful for your efforts.

Kathy Reimer